3900 Series Digital Radio Test Set

TETRA Programming Manual

Issue-4

3900 Series

Digital Radio Test Set

TETRA Remote Programming Manual

PUBLISHED BY
Aeroflex

Original Release	Jun 2009
Issue-2	Oct 2011
Issue-3	Mar 2013
Issue-4	Sep 2013

10200 West York Street/ Wichita, Kansas 67215 U.S.A. / (316) 522-4981 / FAX (316) 524-2623

Subject to Export Control, see Cover Page for details.

Preface

ABOUT THIS MANUAL

This manual identifies Remote Commands for the 3900 Series TETRA Options. The remote commands identified in this manual are only valid when the corresponding TETRA System Option is installed in the Test Set.

Refer to the 3900 Series Remote Programming Manual for additional information about 3900 Remote Commands. Refer to the 3900 Series Operation Manual for information pertaining to Test Set operation.

NOMENCLATURE STATEMENT

The 3901, 3902 and 3920”x” Digital Radio Test Set is the official nomenclature for the test sets currently included in the 3900 Digital Radio Test Set Series. In this manual, 3900, unit or Test Set, refers to the 3901, 3902 and 3920”x” Digital Radio Test Sets unless otherwise indicated.

INTENDED AUDIENCE

This manual is intended for personnel who have read the 3900 Series Operation Manual and who are familiar with the use of remote command language.

TEST SET REQUIREMENTS

Refer to the 3900 Series Operations Manual for information on the following:

- Safety Precautions
- Power Requirements
- Platform Performance Data Specifications
- Repacking / Shipping Test Set

THIS PAGE INTENTIONALLY LEFT BLANK.

Contents

THIS PAGE INTENTIONALLY LEFT BLANK.

Table of Contents

TETRA BS T1 Remote Commands . . . . . 3 - 1

TEDS BS T4 Remote Commands . . . . . 4 - 1

TETRA MS Remote Commands . . . . . 5 - 1

TETRA MS T1 Remote Commands . . . . . 6 - 1

TEDS MS T4 Remote Commands . . . . . 7 - 1

TETRA DM Remote Commands . . . . . .8 - 1

Units of Measurement Index . . . . . .A - 1

THIS PAGE INTENTIONALLY LEFT BLANK.

Chapter 1 - TETRA Channel Plans

1.1 INTRODUCTION

This chapter lists the 3900 TETRA Channel Plans Default Values. Tiles are listed in the order in which they appear in the Channel Plan drop-down menu.

Content in this chapter is for TETRA BS, TETRA BS T1, TETRA MS, TETRA MS T1 and TETRA DM.

1.2 CONFIG - CHANNEL PLAN - EDIT PLAN

Channel Block 1

Channel Spacing:	+5.0 to +500.0 kHz, -5.0 to -500.0 kHz
Duplex Offset:	-100.0 to +100.0 MHz
Enable:	Excluded | Included
Highest Channel:	0 to 4095
Lowest Channel:	0 to 4095
Lowest Ch Downlink Freq:	100.0 kHz to 2.71 GHz

Channel Block 2

Channel Spacing:	+5.0 to +500.0 kHz, -5.0 to -500.0 kHz
Duplex Offset:	-100.0 to +100.0 MHz
Enable:	Excluded | Included
Highest Channel:	0 to 4095
Lowest Channel:	0 to 4095
Lowest Ch Downlink Freq:	100.0 kHz to 2.71 GHz

Sys Info

Duplex Spacing:	0, 1, 2, 3, 4, 5, 6, 7 (interpretation depends on Frequency Band)
Frequency Band:	0 (undefined) 1 (100.0 MHz) to 9 (900.0 MHz) 10 to 15 (undefined)
Offset:	0 (0.0 kHz) 1 (+6.25 kHz) 2 (-6.25 kHz) 3 (+12.5 kHz)
Reverse Operation:	0 (Normal) 1 (Reverse)

1.3 CONFIG - CHANNEL PLAN - NEW PLAN

Based On:	Any Channel Plan except No Plan
Channel Plan Title:	Text, 20 char max
New Values:	Initialized from 'Based On' Plan For values see Edit Plan

1.4 DEFAULT - CHANNEL PLAN - NO PLAN

Initial Values

Downlink Frequency:	390.000000 MHz (Gen Freq in MS modes, Ana Freq in BS modes)
Duplex Spacing:	10.000000 MHz
Duplex Spacing Lock:	Locked
Uplink Frequency:	380.000000 MHz (Gen Freq in BS modes, Ana Freq in MS modes)

Sys Info

Duplex Spacing:	0 (Reserved)
Frequency Band:	0 (10.0 MHz)
Offset:	0 (0.0 kHz)
Reverse Operation:	0 (Normal)

1.5 DEFAULT - CHANNEL PLAN - TETRA 380-400 +12.5

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	10.0 MHz
Highest Channel:	3999
Included / Excluded:	Included
Lowest Channel:	3600
Lowest Ch Downlink Freq:	390.012500 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	3600
Traffic Channel:	3700

Sys Info

Duplex Spacing:	0 (10.0 MHz)
Frequency Band:	3 (300.0 MHz)
Offset:	3 (12.5 kHz)
Reverse Operation:	0 (Normal)

1.6 DEFAULT - CHANNEL PLAN - TETRA 380-400 ZERO

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	10.0 MHz
Highest Channel:	4000
Included / Excluded:	Included
Lowest Channel:	3600
Lowest Ch Downlink Freq:	390.000000 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	3600
Traffic Channel:	3700

Sys Info

Duplex Spacing:	0 (10.0 MHz)
Frequency Band:	3 (300.0 MHz)
Offset:	0 (0.0 kHz)
Reverse Operation:	0 (Normal)

1.7 DEFAULT - CHANNEL PLAN - TETRA 410-430 +12.5

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	10.0 MHz
Highest Channel:	1199
Included / Excluded:	Included
Lowest Channel:	800
Lowest Ch Downlink Freq:	420.012500 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	800
Traffic Channel:	900

Sys Info

Duplex Spacing:	0 (10.0 MHz)
Frequency Band:	4 (400.0 MHz)
Offset:	3 (12.5 kHz)
Reverse Operation:	0 (Normal)

1.8 DEFAULT - CHANNEL PLAN - TETRA 410-430 -6.25

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	10.0 MHz
Highest Channel:	1200
Included / Excluded:	Included
Lowest Channel:	801
Lowest Ch Downlink Freq:	420.018750 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	801
Traffic Channel:	901

Sys Info

Duplex Spacing:	0 (10.0 MHz)
Frequency Band:	4 (400.0 MHz)
Offset:	2 (-6.25 kHz)
Reverse Operation:	0 (Normal)

1.9 DEFAULT - CHANNEL PLAN - TETRA 410-430 ZERO

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	10.0 MHz
Highest Channel:	1200
Included / Excluded:	Included
Lowest Channel:	800
Lowest Ch Downlink Freq:	420.000000 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	800
Traffic Channel:	900

Sys Info

Duplex Spacing:	0 (10.0 MHz)
Frequency Band:	4 (400.0 MHz)
Offset:	0 (0.0 kHz)
Reverse Operation:	0 (Normal)

1.10 DEFAULT - CHANNEL PLAN - TETRA 450-470 +12.5

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	10.0 MHz
Highest Channel:	2799
Included / Excluded:	Included
Lowest Channel:	2400
Lowest Ch Downlink Freq:	460.012500 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	2400
Traffic Channel:	2500

Sys Info

Duplex Spacing:	0 (10.0 MHz)
Frequency Band:	4 (400.0 MHz)
Offset:	3 (+12.5 kHz)
Reverse Operation:	0 (Normal)

1.11 DEFAULT - CHANNEL PLAN - TETRA 450-470 ZERO

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	10.0 MHz
Highest Channel:	2800
Included / Excluded:	Included
Lowest Channel:	2400
Lowest Ch Downlink Freq:	460.000000 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	2400
Traffic Channel:	2500

Sys Info

Duplex Spacing:	0 (10.0 MHz)
Frequency Band:	4 (400.0 MHz)
Offset:	0 (0.0 kHz)
Reverse Operation:	0 (Normal)

1.12 DEFAULT - CHANNEL PLAN - TETRA 805-870 +12.5

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	45.0 MHz
Highest Channel:	2799
Included / Excluded:	Included
Lowest Channel:	2000
Lowest Ch Downlink Freq:	850.012500 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	2040
Traffic Channel:	2140

Sys Info

Duplex Spacing:	1 (45.0 MHz)
Frequency Band:	8 (800.0 MHz)
Offset:	3 (+12.5 kHz)
Reverse Operation:	0 (Normal)

1.13 DEFAULT - CHANNEL PLAN - TETRA 805-870 ZERO

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	45.0 MHz
Highest Channel:	2800
Included / Excluded:	Included
Lowest Channel:	2000
Lowest Ch Downlink Freq:	850.000000 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	2040
Traffic Channel:	2140

Sys Info

Duplex Spacing:	1 (45.0 MHz)
Frequency Band:	8 (800.0 MHz)
Offset:	0 (0.0 kHz)
Reverse Operation:	0 (Normal)

1.14 DEFAULT - CHANNEL PLAN - TETRA 870-921 +12.5

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	45.0 MHz
Highest Channel:	839
Included / Excluded:	Included
Lowest Channel:	600
Lowest Ch Downlink Freq:	915.012500 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	600
Traffic Channel:	700

Sys Info

Duplex Spacing:	1 (45.0 MHz)
Frequency Band:	9 (900.0 MHz)
Offset:	3 (+12.5 kHz)
Reverse Operation:	0 (Normal)

1.15 DEFAULT - CHANNEL PLAN - TETRA 870-921 ZERO

Initial Values

Channel Block 1

Channel Spacing:	25.0 kHz
Duplex Offset:	45.0 MHz
Highest Channel:	840
Included / Excluded:	Included
Lowest Channel:	600
Lowest Ch Downlink Freq:	915.000000 MHz

Channel Block 2

Included / Excluded:	Excluded
Control Channel:	600
Traffic Channel:	700

Sys Info

Duplex Spacing:	1 (45.0 MHz)
Frequency Band:	9 (900.0 MHz)
Offset:	0 (0.0 kHz)
Reverse Operation:	0 (Normal)

Chapter 2 - TETRA BS Remote Commands

2.1 INTRODUCTION

This chapter lists the Remote Commands for configuring TETRA BS System Parameters. Remote Commands are listed alphabetically under the following Display Tile headings:

2.2 AUDIO TILE

2.2.1 AF Generators - Enable

:AF:GENerator:SOURceN:ENABle
:AF:GENerator:SOURceN:ENABle?

Description:	Set command Enables/Disables the specified AF Generator. Query command returns parameter setting.
Parameter:	OFF | ON | 0 | 1
Default Value:	OFF
Set/Query Format:	Boolean
Example:	:AF:GENerator:SOURce2:ENABle ON Enables AF Generator 2.
Query Response:	:AF:GENerator:SOURce2:ENABle? 1
NOTE	SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

2.2.2 AF Generators - Frequency

:AF:GENerator:SOURceN:FREQuency
:AF:GENerator:SOURceN:FREQuency?

Description: Set command defines the frequency source for the specified AF Generator. Query command returns parameter setting.
Range: 1.0 Hz to 20.0 kHz
Units: Hz | kHz
Default Value:
AF 1: 1.0 kHz
AF 2: 300.0 Hz
AF 3: 3.4 kHz
Set/Query Format: NRf | NR2 (Hz)
Example: :AF:GENerator:SOURce3:FREQuency 15kHz
Sets AF Generator 3 Frequency to 15.0 kHz.
Query Response: :AF:GENerator:SOURce3:FREQuency?
15000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

2.2.3 AF Generators - Level

:AF:GENerator:SOURceN:LEVel
:AF:GENerator:SOURceN:LEVel? <units>

Description: Set command defines the Source Level for the specified AF Generator. Query command returns parameter setting in specified units.
Range: 1.0 mV to 5.0 Vrms
Units: dBm | V | mV | µV | nV | dBµV
Default Value: 100.0 mV
Set/Query Format: NRf | NR2 (mV)
Example: :AF:GENerator:SOURce1:LEVel 5V
Sets AF Generator 1 Level (Amplitude) to 5.0 Volts.
Query Response: :AF:GENerator:SOURce1:LEVel? nV
50000000000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

2.2.4 AF Generators - Waveform

:AF:GENerator:SOURceN:SHAPe
:AF:GENerator:SOURceN:SHAPe?

Description: Set command defines the Waveform for the specified AF Generator.
Query command returns parameter setting.

Parameter: SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF

Query Data: SNR | SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF | TONESEQ | TONEREM

Default Value: SINE

Set/Query Format: CPD | CRD

Example: :AF:GENerator:SOURce2:SHAPe SQUare
Sets AF Generator 2 Waveform shape to Square.

Query Response: :AF:GENerator:SOURce2:SHAPe?
SQU

NOTE

SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

DTMF waveform is only valid on AF Generator 1. AF Generator 2 is unavailable when DTMF is selected on AF Generator 1.

DCS and DCSINV are not supported on AF Generator 3.

AF Generator 1 is unavailable as a modulation source when Normal MOD SNR Noise Measurements are defined (:CONFigure:MOD:ANALyzer:SNR:MODE 1) and AF:GENerator:SOURce1:SHAPe? returns SNR.

2.2.5 AF Measurements - AF Level Audio Units

:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts
:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?

Description: Set command defines the unit of measure for AF Audio Level measurement.
Query command returns parameter setting.

Parameter: V | dBr | dBV | dBm | W

Default Value: V

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts DBR
Displays AF Level Audio measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?
DBR

2.2.6 AF Measurements - AF Level Balanced Units

:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts
:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?

Description: Set command defines the unit of measure for AF Balanced Level measurement.
Query command returns parameter setting.

Parameter: dBm | dBr | V

Default Value: dBm

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts DBR
Displays AF Balanced Level measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?
DBR

NOTE AF Measurement Source must be defined as BALANCED for command to be valid.

2.2.7 AF Measurements - Impedance Audio 1

:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?

Description: Set command defines the Impedance for Audio 1 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD UNBHI
Sets selected Audio 1 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?
INBHI

NOTE Sets Impedance of Audio 1 Input connector whether or not Audio 1 is defined as Audio Source.

2.2.8 AF Measurements - Impedance Audio 2

:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?

Description: Set command defines the Impedance for Audio 2 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD UNBHI
Sets selected Audio 2 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?
INBHI

NOTE Sets Impedance of Audio 2 Input connector whether or not Audio 2 is defined as Audio Source.

2.2.9 AF Measurements - Filter Type

:AF:ANALyzer:MFILter
:AF:ANALyzer:MFILter?

Description: Set command selects the Audio Analyzer Post Detection Filter.
Query command returns parameter setting.

Parameter: PSOPh | None | LP1 | LP2 | LP3 | LP4 | LP5 | LP6 | LP7 | HP1 | HP2 | HP3 | BP0 | BP1 | BP2 | BP3 | BP4 | BP5 | BP6 | BP7 | BP8 | BP9 | BP10 | BP11 | BP12 | BP13 | BP14 | BP15 | BP16

where:

NONE = No Filter	BP2 = 0.3 to 5.0 kHz BP
PSOPh = Psoph (CMESS or CCITT)	BP3 = 0.3 to 20.0 kHz BP
LP1 = 300.0 Hz LP	BP4 = 0.3 to 15.0 kHz BP
LP2 = 5.0 kHz LP	BP5 = 0.02 to 300.0 Hz BP
LP3 = 20.0 kHz LP	BP6 = 0.02 to 3.0 kHz BP
LP4 = 15.0 kHz LP	BP7 = 0.02 to 3.4 kHz BP
LP5 = 3.0 kHz LP	BP8 = 0.02 to 5.0 kHz BP
LP6 = 625.0 kHz LP*	BP9 = 0.02 to 15.0 kHz BP
LP7 = 10.0 kHz LP*	BP10 = 0.02 to 20.0 kHz BP
LP8 = 100.0 Hz LP*	BP11 = 0.05 to 300.0 Hz BP
HP1 = 300.0 Hz HP**	BP12 = 0.05 to 3.0 kHz BP
HP2 = 20.0 Hz HP	BP13 = 0.05 to 3.4 kHz BP
HP3 = 50.0 Hz HP	BP14 = 0.05 to 5.0 kHz BP
BP0 = 0.3 to 3.0 kHz BP	BP15 = 0.05 to 15.0 kHz BP
BP1 = 0.3 to 3.4 kHz BP	BP16 = 0.05 to 20.0 kHz BP

Default Value: NONE (No Filter)

Set/Query Format: CPD | CRD

Example: :AF:ANALyzer:MFILter LP3
Selects 20.0 kHz Low Pass Filter for AF measurements.

Query Response: :AF:ANALyzer:MFILter?
LP3

NOTE

Filter selected should be appropriate for signal received from UUT.
When PSOPH is selected, Filter weight is defined using :CONFigure:AF:MFILter command.
Test Set does not process any commands following this one until this command is completed.
*LP6, LP7 and LP8 are used by the Audio Analyzer Tracking Generator and can not be defined by user, but may be returned as query data.
**When HP1 (300 Hz HP) is selected, CONFigure:AF:HZ300FILter selects the type of 300 Hz filter being used.

2.2.10 AF Measurements - Source

:CONFigure:AF:ANALyzer:SOURce
:CONFigure:AF:ANALyzer:SOURce?

Description: Set command defines the Source for Audio Analyzer.
Query command returns parameter setting.

Parameter: AUD1 | AUD2 | BAL | MIC

Default Value: AUD1

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce MIC
Selects Microphone as the AF Analyzer Audio Source.

Query Response: :CONFigure:AF:ANALyzer:SOURce?
MIC

NOTE Test Set does not process any commands following this one until this command is completed.

2.2.11 AF Measurements - Query AF Frequency Measurement

:FETCh:AF:ANALyzer:FREQuency?

Description: Command returns AF Frequency measurement data.

Query Data: <statusbyte>, <avgcount>, <avg>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

avgcount (NR1): value

avg (NR2): Hz

Query Response: :FETCh:AF:ANALyzer:FREQuency?
0,25,1000.0

NOTE Statusbyte may return more than one condition as a bitmask.

2.2.12 AF Measurements - Query AF Level Measurement

:FETCh:AF:ANALyzer:LEVel?

Description: Command returns AF Level measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<units>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1):
0 = All limit checks passed
1 = Average upper failed limit
2 = Average lower failed limit

avgcount (NR1): value

avg (NR2):
mV (Unbalanced)
dBm (Balanced)

units (NR1):
6 = dBm
7 = V
11 = W
12 = mW
13 = µW
16 = dBr
17 = dBV
20 = nW

Query Response: :FETCh:AF:ANALyzer:LEVel?
0,0,1,0.002

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

2.2.13 AF Measurements - Query AF Sinad Measurement

:FETCh:AF:ANALyzer:SINad?

Description: Command returns AF Sinad measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<wc>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1): 0 = All limit checks passed
2 = Average lower failed limit
8 = Worst Case lower failed limit

avgcount (NR1): value

avg, wc (NR2): dB

Query Response: :FETCh:AF:ANALyzer:SINad?
0,0,25,0.01,0.00

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

2.2.14 Loudspeaker

:CONFigure:PORT:LOUDspeaker
:CONFigure:PORT:LOUDspeaker?

Description: Set command selects Loudspeaker port.
Query command returns parameter setting.

Parameter: OFF | AUDio | FAUDio | DEMod | DDEMod | FDEMod | FDDEMod

Default Value: OFF

Set/Query Format: CPD | CRD

Example: :CONFigure:PORT:LOUDspeaker AUDio
Selects Audio as the Loudspeaker port.

Query Response: :CONFigure:PORT:LOUDspeaker?
AUD

2.3 BS PARAMETERS CONFIGURATION

2.3.1 Base Parameters - Power Class

:CONFigure:BSParameter:PCLass
:CONFigure:BSParameter:PCLass?

Description: Set command defines Base Station Power Class.
Query command returns parameter setting.

Parameter: PC1 | PC2 | PC3 | PC4 | PC5 | PC6 | PC7 | PC8 | PC9 | PC10

where:
PC1 = 46.0 dBm / 40.0 W
PC2 = 44.0 dBm / 25.0 W
PC3 = 42.0 dBm / 15.0 W
PC4 = 40.0 dBm / 10.0 W
PC5 = 38.0 dBm / 6.3 W
PC6 = 36.0 dBm / 4.0 W
PC7 = 34.0 dBm / 2.5 W
PC8 = 32.0 dBm / 1.6 W
PC9 = 30.0 dBm / 1.0 W
PC10 = 28.0 dBm / 600.0 mW

Default Value: PC1 (46.0 dBm / 40.0 W)

Set/Query Format: CPD | CRD

Example: :CONFigure:BSPARameter:PCLass PC3
Sets Power Class to PC3 (42.0 dBm / 15.0 W).

Query Response: :CONFigure:BSPARameter:PCLass?
PC3

2.4 CHANNEL PLAN CONFIGURATION

2.4.1 Channel Plan - Channel Plan Information

:CONFigure:CHPLan:INFO?

Description: Command returns information about current Channel Plan.

Query Data: <plan_name>,<frequency band>,<offset>,<duplex spacing>,
<reverse operation>,<block 1 lowest channel>,<block 1 highest channel>,
<block 1 lowest channel downlink freq>,<block 1 duplex offset>,
<block 1 channel spacing>,<block 2 state>,<block 2 lowest channel>,
<block 2 highest channel>,<block 2 lowest channel downlink freq>,
<block 2 duplex offset>,<block 2 channel spacing>

Plan Name:	ascii string
Frequency Band:	NR1
Offset:	NR1 (Hz)
Duplex Spacing:	NR1 (Hz)
Reverse Operation:	NR1
Lowest Channel:	NR1 (Hz)
Highest Channel:	NR1
Low Ch DLink Freq:	NR1
Duplex Offset:	NR1 (Hz)
Channel Spacing:	NR1 (Hz)
Block 2 State:	CRD

Query Response: :CONFigure:CHPLan:INFO?
"TETRA 380-400 +12.5",3,3,0,0,3600,3999,390012500,100000000,2500,
EXCL,0,0,0,0,0

2.4.2 Channel Plan - Delete Channel Plan

:CONFigure:CHPLan:DELete

Description: Command deletes specified custom Channel Plan.

Parameter: ascii string

Example: :CONFigure:CHPLan:DELete "test_plan"
Deletes Channel Plan named 'test_plan'.

Query Response: no query

NOTE Command only applies to customized Channel Plans: Pre-defined Channel Plans can not be deleted.

2.4.3 Channel Plan - Load Channel Plan

:CONFigure:CHPLan:LOAD
:CONFigure:CHPLan:LOAD?

Description: Set command loads named plan as current Channel Plan.
Query command returns name of Channel Plan currently loaded.

Parameter: file name

Default Value: TETRA 380-400 +12.5

Set/Query Format: ascii string | ascii response data

Example: :CONFigure:CHPLan:LOAD “TETRA 380-400 ZERO”
Loads TETRA 380-400 ZERO Channel Plan.

Query Response: :CONFigure:CHPLan:LOAD?
TETRA 380-400 ZERO

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

2.4.4 Channel Plan - New Channel Plan

:CONFigure:CHPLan:NEW

Description: Command creates new Channel Plan.

Parameters: <plan_name>,<frequency band>,<offset>,<duplex spacing>,<reverse operation>,<block 1 data>,<block 2 data>

		Parameter/Range	Format	Default
	Plan Name	20 character max	ascii string	
System Info	**Freq Band**	0 to 15	NR1	
	Offset	0 to 3	NR1	
	Duplex Spacing	0 to 7	NR1	
	Reverse Operation	0 | 1	NR1	
Block 1	**Lowest Channel**	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies
Block 2	**State**	INCL | EXCL	CPD	varies
	Lowest Channel	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies

Example: :CONFigure:CHPlan:NEW
“test_plan”,3,3,0,0,3600,3999,390012500,100000000,2500,EXCL,0,0,0,0,0

NOTE
Default values vary according to selected Channel Plan.
No Query.

2.5 OFFSETS CONFIGURATION

2.5.1 RF Analyzer - Offset Enable

:CONFigure:OFFSet:ANALyzer:ENABle
:CONFigure:OFFSet:ANALyzer:ENABle?

Description: Set command Enables/Disables the RF Analyzer Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:ANALyzer:ENABle ON
Enables RF Analyzer Offset.

Query Response: :CONFigure:OFFSet:ANALyzer:ENABle?
1

2.5.2 RF Analyzer - Offset Value

:CONFigure:OFFSet:ANALyzer:VALue
:CONFigure:OFFSet:ANALyzer:VALue?

Description: Set command defines the RF Analyzer Offset Value.
Query command returns parameter setting.

Range: -40.0 to +40.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:ANALyzer:VALue -10dB
Sets RF Analyzer Offset to -10.0 dB.

Query Response: :CONFigure:OFFSet:ANALyzer:VALue?
-10.00

2.6 SYSTEM ID CONFIGURATION

2.6.1 System ID Parameters - Base Station Color Code

:CONFigure:BSIDentity:BCC
:CONFigure:BSIDentity:BCC?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.

Range: 0 to 63

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:BSIDentity:BCC 50
Sets Base Station Color Code to 50.

Query Response: :CONFigure:BSIDentity:BCC?
50

2.6.2 System ID Parameters - Base Station Mobile Country Code

:CONFigure:BSIDentity:MCC
:CONFigure:BSIDentity:MCC?

Description: Set command defines Base Station Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 999

Default Value: 1 (Test)

Set/Query Format: NR1

Example: :CONFigure:BSIDentity:MCC
Sets Base Station Mobile Country Code to 234 (United Kingdom).

Query Response: :CONFigure:BSIDentity:MCC?
234

2.6.3 System ID Parameters - Base Station Mobile Network Code

:CONFigure:BSIDentity:MNC
:CONFigure:BSIDentity:MNC?

Description: Set command defines Base Station Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 16383

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:BSIDentity:MNC
Sets Base Station Mobile Network Code to 1234.

Query Response: :CONFigure:BSIDentity:MNC?
1234

2.6.4 System ID Parameters - Base Station Update Mode

:CONFigure:BSIDentity:UPDate
:CONFigure:BSIDentity:UPDate?

Description: Set command defines Base Station Update mode of operation.
Query command returns parameter setting.

Parameter: AUTO | MANual

Default Value: AUTO

Set/Query Format: CPD | CRD

Example: :CONFigure:BSIDentity:UPDate MANUAL
Sets Base Station Update mode of operation to Manual.

Query Response: :CONFigure:BSIDentity:UPDate?
MAN

2.7 TX MEASUREMENTS LIMITS CONFIGURATION

2.7.1 Tx Measurements - Initialize Limits

:LIMits:TXMeas:INITialize:xxx

Description: Set command Initializes Tx Measurement Limits as Normal or Extreme.

Parameter: NORMal | EXTReme

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:INITialize:PRBS NORMAL
Initializes PRBS Burst Tx Measurement Limits to Normal.

Query Response: no query

2.7.2 Tx Burst Power - Limit Enable

:LIMits:TXMeas:POWer:ENABle:xxx
:LIMits:TXMeas:POWer:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

DEfault/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:POWer:ENABle:PRBS ON
Enables Limit for Tx Burst Power PRBS burst measurements.

Query Response: :LIMits:TXMeas:POWer:ENABle:PRBS?
1

2.7.3 Tx Burst Power - Limit Value

:LIMits:TXMeas:POWer:VALue:xxx
:LIMits:TXMeas:POWer:VALue:xxx?

Description: Set command defines Limits for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Range: -9.9 to +9.9 dB

Units: dB

Default Values:

Default/Normal:

Upper Limit Value: +2.0 dB

Lower Limit Value: -2.0 dB

Extreme:

Upper Limit Value: +3.0 dB

Lower Limit Value: -4.0 dB

Set/Query Format: data string (NRf) | data string (NR2)

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:POWer:VALue:PRBS 5.0,-5.0
Sets Upper Limit Value for Tx Burst Power PRBS burst measurements to 5.0 dB and Lower Limit for Tx Burst Power PRBS burst measurements to -5.0 dB.

Query Response: :LIMits:TXMeas:POWer:VALue:PRBS?
5.0,-5.0

2.7.4 Tx Frequency Error - Limit Enable

:LIMits:TXMeas:FERRor:ENABle:xxx
:LIMits:TXMeas:FERRor:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

DEfault/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:FERRor:ENABle:PRBS ON
Enables Limit for Tx Frequency Error PRBS burst measurements.

Query Response: :LIMits:TXMeas:FERRor:ENABle:PRBS?
1

2.7.5 Tx Frequency Error - Limit Value

:LIMits:TXMeas:FERRor:VALue:xxx
:LIMits:TXMeas:FERRor:VALue:xxx?

Description: Set command defines Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.0001 to 9.9999 ppm

Units: ppm

Default Values:

Default/Normal: 0.2000 ppm

Extreme: 0.2000 ppm

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:FERRor:VALue:PRBS 0.5ppm
Sets Limit Value for Tx Frequency Error PRBS burst measurements to 0.5 ppm.

Query Response: :LIMits:TXMeas:FERRor:VALue:PRBS?
0.5

2.7.6 Tx Residual Carrier - Limit Enable

:LIMits:TXMeas:RCARrier:ENABle:xxx
:LIMits:TXMeas:RCARrier:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

DEfault/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:RCARrier:ENABle:PRBS ON
Enables Limit for Tx Residual Carrier PRBS burst measurements.

Query Response: :LIMits:TXMeas:RCARrier:ENABle:PRBS?
1

2.7.7 Tx Residual Carrier - Limit Value

:LIMits:TXMeas:RCARrier:VALue:xxx
:LIMits:TXMeas:RCARrier:VALue:xxx?

Description: Set command defines Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 5.0%

Extreme: 5.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:RCARrier:VALue:SYNC 5.0
Sets Limit Value for Tx Residual Carrier Sync Burst measurements to 5.0%.

Query Response: :LIMits:TXMeas:RCARrier:VALue:SYNC?
5.0

2.7.8 Tx Vector Peak - Limit Enable

:LIMits:TXMeas:VPEak:ENABle:xxx
:LIMits:TXMeas:VPEak:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

DEfault/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VPEak:ENABle:PRBS ON
Enables Limit for Tx Vector Peak PRBS burst measurements.

Query Response: :LIMits:TXMeas:VPEak:ENABle:PRBS?
1

2.7.9 Tx Vector Peak - Limit Value

:LIMits:TXMeas:VPEak:VALue:xxx
:LIMits:TXMeas:VPEak:VALue:xxx?

Description: Set command defines Limit for Tx Vector Peak Measurement for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 30.0%

Extreme: 30.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VPEak:VALue:PRBS 15.0
Sets Limit Value for Tx Vector Peak PRBS burst measurements to 15.0%.

Query Response: :LIMits:TXMeas:VPEak:VALue:PRBS?
15.0

2.7.10 Tx Vector RMS - Limit Enable

:LIMits:TXMeas:VRMS:ENABle:xxx
:LIMits:TXMeas:VRMS:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector RMS Measurement for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

DEfault/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VRMS:ENABle:PRBS ON
Enables Limit for Tx Vector RMS PRBS burst measurements.

Query Response:
1

2.7.11 Tx Vector RMS - Limit Value

:LIMits:TXMeas:VRMS:VALue:xxx
:LIMits:TXMeas:VRMS:VALue:xxx?

Description: Set command defines Limit for Tx Vector RMS Measurement for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 10.0%

Extreme: 10.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VRMS:VALue:PRBS 5.0
Sets Limit Value for Tx Vector RMS PRBS burst measurements to 5.0%.

Query Response: :LIMits:TXMeas:VRMS:VALue:PRBS?
5.0

2.8 MODULATION ACCURACY - MAGNITUDE ERROR

2.8.1 Magnitude Error - Measurement Query at Symbol

:FETCh:MACCuracy:MERRor:xxx? p

Description: Command returns Magnitude Error measurement for burst type at symbol point.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Parameter (p): symbol range: 0 to 255 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:MERRor:TS12? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

2.8.2 Magnitude Error - Symbol Range

:FETCh:MACCuracy:MERRor:RANGe:xxx?

Description: Command returns minimum and maximum range values for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:MERRor:RANGe:PRBS?
0,-23,232

NOTE Statusbyte may return more than one condition as a bitmask.

2.9 MODULATION ACCURACY - PHASE ERROR

2.9.1 Phase Error - Measurement Query at Symbol

:FETCh:MACCuracy:PERRor:xxx? p

Description: Command returns Phase Error measurement for burst type at symbol point.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Parameter (p): symbol range: 0 to 255 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): degree

Query Response: :FETCh:MACCuracy:PERRor:TS12? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

2.9.2 Phase Error - Symbol Range

:FETCh:MACCuracy:PERRor:RANGe:xxx?

Description: Command returns minimum and maximum range values for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:PERRor:RANGe:PRBS?
0,-23,232

NOTE Statusbyte may return more than one condition as a bitmask.

2.10 MODULATION ACCURACY - VECTOR ERROR

2.10.1 Vector Error - Measurement Query at Symbol

:FETCh:MACCuracy:VERRor:xxx? p

Description: Command returns Vector Error measurement for burst type at symbol point.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Parameter (p): symbol range: 0 to 255 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:VERRor:TS12? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

2.10.2 Vector Error - Symbol Range

:FETCh:MACCuracy:VERRor:RANGe:xxx?

Description: Command returns minimum and maximum range values for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:VERRor:RANGe:PRBS?
0,-23,232

NOTE Statusbyte may return more than one condition as a bitmask.

2.11 OPERATIONS/STATUS

2.11.1 Base Station - Identity

:PROTocol:BSIDentity?

Description: Command returns Base Station Protocol information.

Query Data: <statusbyte>,<MCC>,<MNC>,<BCC>,<LA>

statusbyte (NR1): 0 = MCC, MNC, BCC and LA are valid
1 = MCC, MNC and BCC are Invalid; LA is Valid
2 = MCC, MNC and BCC are Valid; LA is Invalid
3 = MCC, MNC, BCC and LA are Invalid

MCC (NR1): 0 to 999

MNC (NR1): 0 to 16383

BCC (NR1): 0 to 63

LA (NR1): 0 to 16383

Query Response: :PROTocol:BSIDentity?
1,0,0,0

2.12 RF SETTINGS (RECEIVE CHANNEL)

2.12.1 RF Analyzer - Automatic Gain Control

:RF:ANALyzer:AGC
:RF:ANALyzer:AGC?

Description: Set command Enables/Disables the AGC mode of operation.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:ANALyzer:AGC OFF
Disables Automatic Gain Control.

Query Response: :RF:ANALyzer:AGC?
0

2.12.2 RF Analyzer - Input Connector

:RF:ANALyzer:PORT
:RF:ANALyzer:PORT?

Description: Set command selects the RF Input Connector.
Query command returns parameter setting.

Parameter: TR | ANT

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:PORT ANT
Selects Antenna Connector as RF Input Connector.

Query Response: :RF:ANALyzer:PORT?
ANT

NOTE Refer to 3900 Platform Specifications for maximum input values.

2.12.3 RF Analyzer - Power Level

:RF:ANALyzer:LEVel
:RF:ANALyzer:LEVel?

Description: Set command defines RF Analyzer Level.
Query command returns parameter setting.

Range:
TR: -40.0 to +55.0 dBm in 5 dB steps
GEN: -80.0 to 0.0 dBm in 5 dB steps

Units: dBm

Default Value: 40.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:ANALyzer:LEVel -20dBm
Sets RF Analyzer Level to -20.0 dBm.

Query Response: :RF:ANALyzer:LEVel?
-20.0

2.12.4 RF Analyzer - Pre-Amplifier

:RF:ANALyzer:RECeiver:AMP
:RF:ANALyzer:RECeiver:AMP?

Description: Set command Enables/Disables Receiver Pre-Amplifier.
Query command returns parameter setting.
Parameter: OFF | ON | 0 | 1
Default Value: OFF
Set/Query Format: Boolean
Example: :RF:ANALyzer:RECeiver:AMP ON
Enables Receiver Pre-Amplifier.
Query Response: :RF:ANALyzer:RECeiver:AMP?
1

2.12.5 RF Analyzer - Receive Frequency

:RF:ANALyzer:FREQuency
:RF:ANALyzer:FREQuency?

Description: Set command defines the RF Analyzer Frequency.
Query command returns parameter setting.
Range: 100.0 kHz to 2.71 GHz
Units : Hz | kHz | MHz | GHz
Default Value: 390.0 MHz
Set/Query Format: NRf | NR1 (Hz)
Example: :RF:ANALyzer:FREQuency 400MHz
Sets RF Analyzer Frequency to 400.0 MHz.
Query Response: :RF:ANALyzer:FREQuency?
400000000

NOTE Set command is only valid when No Plan is selected as the Channel Plan.

2.12.6 RF Analyzer - RF Channel

:RF:CHANnel
:RF:CHANnel?

Description: Set command defines RF Channel.
Query command returns parameter setting.
Range: defined by selected Channel Plan
Default Value: defined by selected Channel Plan
Set/Query Format: NR1
Example: :RF:CHANnel 3700
Sets RF Channel to 3700.
Query Response: :RF:CHANnel?
3700

2.13 TX MEASUREMENTS TEST TILE

2.13.1 Tx Measurements - Continuous Sweep

:INITiate:CONTinuous:TXMeas:xxx
:INITiate:CONTinuous:TXMeas:xxx

Description: Set command initiates Continuous Tx Measurement sweeps for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Set/Query Format: Boolean

Default Value: 1 (Off)

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :INITiate:CONTinuous:TXMeas:PRBS ON
Enables continuous Tx Measurement sweeps for PRBS burst.

Query Response: :INITiate:CONTinuous:TXMeas:PRBS?
1

2.13.2 Tx Measurements - Single Sweep

:INITiate:IMMediate:TXMeas:xxx

Description: Command initiates Single Tx Measurements sweep for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Response: no query

2.13.3 Tx Measurements - Stop Measurements

:ABORt:TXMeas:xxx

Description: Command stops Tx Measurements for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Response: No query

2.13.4 Frequency Error - Measurement Query

:FETCh:MACCuracy:FERRor:xxx?

Description: Command returns Frequency Error measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR2): Hz

Query Response: :FETCh:MACCuracy:FERRor:PRBS?
0,0,20,0.1,0.4,-0.3,0.4

NOTE Statusbyte may return more than one condition as a bitmask.

2.13.5 Frequency Error - Sample Count

:CONFigure:MACCuracy:FERRor:SAMPle:xxx
:CONFigure:MACCuracy:FERRor:SAMPle:xxx?

Description: Sets the number of samples used to calculate Frequency Error measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :CONFigure:MACCuracy:FERRor:SAMPle:PRBS 50
Sets the number of samples used to calculate Frequency Error PRBS burst measurements to 50.

Query Response: :CONFigure:MACCuracy:FERRor:SAMPle:PRBS?
50

2.13.6 Residual Carrier - Measurement Query

:FETCh:MACCuracy:RCARrier:xxx?

Description: Command returns Residual Carrier measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:RCARrier:PRBS?
0,0,20,0.1,0.1

NOTE Statusbyte may return more than one condition as a bitmask.

2.13.7 Residual Carrier - Sample Count

:CONFigure:MACCuracy:RCARrier:SAMPle:xxx
:CONFigure:MACCuracy:RCARrier:SAMPle:xxx?

Description: Sets the number of samples used to calculate Residual Carrier measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :CONFigure:MACCuracy:RCARrier:SAMPle:PRBS 50
Sets the number of samples used to calculate Residual Carrier PRBS burst measurements to 50.

Query Response: :CONFigure:MACCuracy:RCARrier:SAMPle:PRBS?
50

2.13.8 Tx Power - Measurement Query

:FETCh:POWer:xxx?

Description: Command returns Tx Power measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit

sample count (NR1): value

avg, max, min (NR2): dBm

Query Response: :FETCh:POWer:PRBS?
0,7,20,-5.4,-5.4,-5.4

NOTE Statusbyte may return more than one condition as a bitmask.

2.13.9 Tx Power - Sample Count

:CONFigure:POWer:SAMPle:xxx
:CONFigure:POWer:SAMPle:xxx?

Description: Sets the number of samples used to calculate Tx Power measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :CONFigure:POWer:SAMPle:PRBS 50
Sets the number of samples used to calculate Tx Power PRBS burst measurements to 50.

Query Response: :CONFigure:POWer:SAMPle:PRBS?
50

2.13.10 Vector Peak - Measurement Query

:FETCh:MACCuracy:VPEak:xxx?

Description: Command returns Vector Peak measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:VPEak:PRBS?
0,0,20,2.9,3.8

NOTE Statusbyte may return more than one condition as a bitmask.

2.13.11 Vector Peak - Sample Count

:CONFigure:MACCuracy:VPEak:SAMPle:xxx
:CONFigure:MACCuracy:VPEak:SAMPle:xxx?

Description: Sets the number of samples used to calculate Vector Peak measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :CONFigure:MACCuracy:VPEak:SAMPle:PRBS 50
Sets the number of samples used to calculate Vector Peak PRBS burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VPEak:SAMPle:PRBS?
50

2.13.12 Vector RMS - Measurement Query

:FETCh:MACCuracy:VRMS:xxx?

Description: Command returns Vector RMS measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:VRMS:PRBS?
0,0,20,1.1,1.4

NOTE Statusbyte may return more than one condition as a bitmask.

2.13.13 Vector RMS - Sample Count

:CONFigure:MACCuracy:VRMS:SAMPle:xxx
:CONFigure:MACCuracy:VRMS:SAMPle:xxx?

Description: Sets the number of samples used to calculate Vector RMS measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :CONFigure:MACCuracy:VRMS:SAMPle:PRBS 50
Sets the number of samples used to calculate Vector RMS PRBS burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VRMS:SAMPle:PRBS?
50

Chapter 3 - TETRA BS T1 Remote Commands

3.1 INTRODUCTION

This chapter lists the Remote Commands for configuring TETRA BS T1 System Parameters. Remote Commands are listed alphabetically under the following Display Tile headings:

3.2 AUDIO TEST TILE

3.2.1 AF Generators - Enable

:AF:GENerator:SOURceN:ENABle
:AF:GENerator:SOURceN:ENABle?

Description:	Set command Enables/Disables the specified AF Generator. Query command returns parameter setting.
Parameter:	OFF | ON | 0 | 1
Default Value:	OFF
Set/Query Format:	Boolean
Example:	:AF:GENerator:SOURce2:ENABle ON Enables AF Generator 2.
Query Response:	:AF:GENerator:SOURce2:ENABle? 1
NOTE	SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

3.2.2 AF Generators - Frequency

:AF:GENerator:SOURceN:FREQuency
:AF:GENerator:SOURceN:FREQuency?

Description: Set command defines the frequency source for the specified AF Generator. Query command returns parameter setting.
Range: 1.0 Hz to 20.0 kHz
Units: Hz | kHz
Default Value:
AF 1: 1.0 kHz
AF 2: 300.0 Hz
AF 3: 3.4 kHz
Set/Query Format: NRf | NR2 (Hz)
Example: :AF:GENerator:SOURce3:FREQuency 15kHz
Sets AF Generator 3 Frequency to 15.0 kHz.
Query Response: :AF:GENerator:SOURce3:FREQuency?
15000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

3.2.3 AF Generators - Level

:AF:GENerator:SOURceN:LEVel
:AF:GENerator:SOURceN:LEVel? <units>

Description: Set command defines the Source Level for the specified AF Generator. Query command returns parameter setting in specified units.
Range: 1.0 mV to 5.0 Vrms
Units: dBm | V | mV | µV | nV | dBµV
Default Value: 100.0 mV
Set/Query Format: NRf | NR2 (mV)
Example: :AF:GENerator:SOURce1:LEVel 5V
Sets AF Generator 1 Level (Amplitude) to 5.0 Volts.
Query Response: :AF:GENerator:SOURce1:LEVel? nV
50000000000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

3.2.4 AF Generators - Waveform

:AF:GENerator:SOURceN:SHAPe
:AF:GENerator:SOURceN:SHAPe?

Description: Set command defines the Waveform for the specified AF Generator.
Query command returns parameter setting.

Parameter: SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF

Query Data: SNR | SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF | TONESEQ | TONEREM

Default Value: SINE

Set/Query Format: CPD | CRD

Example: :AF:GENerator:SOURce2:SHAPe SQUare
Sets AF Generator 2 Waveform shape to Square.

Query Response: :AF:GENerator:SOURce2:SHAPe?
SQU

NOTE

SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

DTMF waveform is only valid on AF Generator 1. AF Generator 2 is unavailable when DTMF is selected on AF Generator 1.

DCS and DCSINV are not supported on AF Generator 3.

AF Generator 1 is unavailable as a modulation source when Normal MOD SNR Noise Measurements are defined (:CONFigure:MOD:ANALyzer:SNR:MODE 1) and AF:GENerator:SOURce1:SHAPe? returns SNR.

3.2.5 AF Measurements - AF Level Audio Units

:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts
:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?

Description: Set command defines the unit of measure for AF Audio Level measurement.
Query command returns parameter setting.

Parameter: V | dBr | dBV | dBm | W

Default Value: V

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts DBR
Displays AF Level Audio measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?
DBR

3.2.6 AF Measurements - AF Level Balanced Units

:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts
:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?

Description: Set command defines the unit of measure for AF Balanced Level measurement.
Query command returns parameter setting.

Parameter: dBm | dBr | V

Default Value: dBm

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts DBR
Displays AF Balanced Level measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?
DBR

NOTE AF Measurement Source must be defined as BALANCED for command to be valid.

3.2.7 AF Measurements - Impedance Audio 1

:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?

Description: Set command defines the Impedance for Audio 1 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD UNBHI
Sets selected Audio 1 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?
INBHI

NOTE Sets Impedance of Audio 1 Input connector whether or not Audio 1 is defined as Audio Source.

3.2.8 AF Measurements - Impedance Audio 2

:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?

Description: Set command defines the Impedance for Audio 2 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD UNBHI
Sets selected Audio 2 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?
INBHI

NOTE Sets Impedance of Audio 2 Input connector whether or not Audio 2 is defined as Audio Source.

3.2.9 AF Measurements - Filter Type

:AF:ANALyzer:MFILter
:AF:ANALyzer:MFILter?

Description: Set command selects the Audio Analyzer Post Detection Filter.
Query command returns parameter setting.

Parameter: PSOPh | None | LP1 | LP2 | LP3 | LP4 | LP5 | LP6 | LP7 | HP1 | HP2 | HP3 | BP0 | BP1 | BP2 | BP3 | BP4 | BP5 | BP6 | BP7 | BP8 | BP9 | BP10 | BP11 | BP12 | BP13 | BP14 | BP15 | BP16

where:

NONE = No Filter	BP2 = 0.3 to 5.0 kHz BP
PSOPh = Psoph (CMESS or CCITT)	BP3 = 0.3 to 20.0 kHz BP
LP1 = 300.0 Hz LP	BP4 = 0.3 to 15.0 kHz BP
LP2 = 5.0 kHz LP	BP5 = 0.02 to 300.0 Hz BP
LP3 = 20.0 kHz LP	BP6 = 0.02 to 3.0 kHz BP
LP4 = 15.0 kHz LP	BP7 = 0.02 to 3.4 kHz BP
LP5 = 3.0 kHz LP	BP8 = 0.02 to 5.0 kHz BP
LP6 = 625.0 kHz LP*	BP9 = 0.02 to 15.0 kHz BP
LP7 = 10.0 kHz LP*	BP10 = 0.02 to 20.0 kHz BP
LP8 = 100.0 Hz LP*	BP11 = 0.05 to 300.0 Hz BP
HP1 = 300.0 Hz HP**	BP12 = 0.05 to 3.0 kHz BP
HP2 = 20.0 Hz HP	BP13 = 0.05 to 3.4 kHz BP
HP3 = 50.0 Hz HP	BP14 = 0.05 to 5.0 kHz BP
BP0 = 0.3 to 3.0 kHz BP	BP15 = 0.05 to 15.0 kHz BP
BP1 = 0.3 to 3.4 kHz BP	BP16 = 0.05 to 20.0 kHz BP

Default Value: NONE (No Filter)

Set/Query Format: CPD | CRD

Example: :AF:ANALyzer:MFILter LP3
Selects 20.0 kHz Low Pass Filter for AF measurements.

Query Response: :AF:ANALyzer:MFILter?
LP3

NOTE

Filter selected should be appropriate for signal received from UUT.
When PSOPH is selected, Filter weight is defined using :CONFigure:AF:MFILter command.
Test Set does not process any commands following this one until this command is completed.
*LP6, LP7 and LP8 are used by the Audio Analyzer Tracking Generator and can not be defined by user, but may be returned as query data.
**When HP1 (300 Hz HP) is selected, CONFigure:AF:HZ300FILter selects the type of 300 Hz filter being used.

3.2.10 AF Measurements - Source

:CONFigure:AF:ANALyzer:SOURce
:CONFigure:AF:ANALyzer:SOURce?

Description: Set command defines the Source for Audio Analyzer.
Query command returns parameter setting.

Parameter: AUD1 | AUD2 | BAL | MIC

Default Value: AUD1

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce MIC
Selects Microphone as the AF Analyzer Audio Source.

Query Response: :CONFigure:AF:ANALyzer:SOURce?
MIC

NOTE Test Set does not process any commands following this one until this command is completed.

3.2.11 AF Measurements - Query AF Frequency Measurement

:FETCh:AF:ANALyzer:FREQuency?

Description: Command returns AF Frequency measurement data.

Query Data: <statusbyte>, <avgcount>, <avg>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

avgcount (NR1): value

avg (NR2): Hz

Query Response: :FETCh:AF:ANALyzer:FREQuency?
0,25,1000.0

NOTE Statusbyte may return more than one condition as a bitmask.

3.2.12 AF Measurements - Query AF Level Measurement

:FETCh:AF:ANALyzer:LEVel?

Description: Command returns AF Level measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<units>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1):
0 = All limit checks passed
1 = Average upper failed limit
2 = Average lower failed limit

avgcount (NR1): value

avg (NR2):
mV (Unbalanced)
dBm (Balanced)

units (NR1):
6 = dBm
7 = V
11 = W
12 = mW
13 = µW
16 = dBr
17 = dBV
20 = nW

Query Response: :FETCh:AF:ANALyzer:LEVel?
0,0,1,0.002

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

3.2.13 AF Measurements - Query AF Sinad Measurement

:FETCh:AF:ANALyzer:SINad?

Description: Command returns AF Sinad measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<wc>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1): 0 = All limit checks passed
2 = Average lower failed limit
8 = Worst Case lower failed limit

avgcount (NR1): value

avg, wc (NR2): dB

Query Response: :FETCh:AF:ANALyzer:SINad?
0,0,25,0.01,0.00

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

3.2.14 Loudspeaker

:CONFigure:PORT:LOUDspeaker
:CONFigure:PORT:LOUDspeaker?

Description: Set command selects Loudspeaker port.
Query command returns parameter setting.

Parameter: OFF | AUDio | FAUDio | DEMod | DDEMod | FDEMod | FDDEMod

Default Value: OFF

Set/Query Format: CPD | CRD

Example: :CONFigure:PORT:LOUDspeaker AUDio
Selects Audio as the Loudspeaker port.

Query Response: :CONFigure:PORT:LOUDspeaker?
AUD

3.3 BS PARAMETERS CONFIGURATION

3.3.1 Base Parameters - Power Class

:CONFigure:BSParameter:PCLass
:CONFigure:BSParameter:PCLass?

Description: Set command defines Base Station Power Class.
Query command returns parameter setting.

Parameter: PC1 | PC2 | PC3 | PC4 | PC5 | PC6 | PC7 | PC8 | PC9 | PC10

where:
PC1 = 46.0 dBm / 40.0 W
PC2 = 44.0 dBm / 25.0 W
PC3 = 42.0 dBm / 15.0 W
PC4 = 40.0 dBm / 10.0 W
PC5 = 38.0 dBm / 6.3 W
PC6 = 36.0 dBm / 4.0 W
PC7 = 34.0 dBm / 2.5 W
PC8 = 32.0 dBm / 1.6 W
PC9 = 30.0 dBm / 1.0 W
PC10 = 28.0 dBm / 600.0 mW

Default Value: PC1 (46.0 dBm / 40.0 W)

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:PCLass PC3
Sets Power Class to PC3 (42.0 dBm/15.0 W).

Query Response: :CONFigure:MPARameter:PCLass?
PC3

3.3.2 Base Parameters - Receiver Class

:CONFigure:BSParameter:RCLass
:CONFigure:BSParameter:RCLass?

Description: Set command defines Base Station Receiver Class.
Query command returns parameter setting.

Parameter: A | B

Default Value: A

Set/Query Format: CPD | CRD

Example: :CONFigure:BSPARameter:RCLass B
Sets Receiver Class to B.

Query Response: :CONFigure:BSPARameter:RCLass?
B

3.4 CHANNEL PLAN CONFIGURATION

3.4.1 Channel Plan - Channel Plan Information

:CONFigure:CHPLan:INFO?

Description: Command returns information about current Channel Plan.

Query Data: <plan_name>,<frequency band>,<offset>,<duplex spacing>,
<reverse operation>,<block 1 lowest channel>,<block 1 highest channel>,
<block 1 lowest channel downlink freq>,<block 1 duplex offset>,
<block 1 channel spacing>,<block 2 state>,<block 2 lowest channel>,
<block 2 highest channel>,<block 2 lowest channel downlink freq>,
<block 2 duplex offset>,<block 2 channel spacing>

Plan Name: ascii string

Frequency Band: NR1

Offset: NR1 (Hz)

Duplex Spacing: NR1 (Hz)

Reverse Operation: NR1

Lowest Channel: NR1 (Hz)

Highest Channel: NR1

Low Ch DLink Freq: NR1

Duplex Offset: NR1 (Hz)

Channel Spacing: NR1 (Hz)

Block 2 State: CRD

Query Response: :CONFigure:CHPLan:INFO?
"TETRA 380-400 +12.5",3,3,0,0,3600,3999,390012500,100000000,2500,
EXCL,0,0,0,0,0

3.4.2 Channel Plan - Delete Channel Plan

:CONFigure:CHPLan:DELete

Description: Command deletes specified custom Channel Plan.

Parameter: ascii string

Example: :CONFigure:CHPLan:DELete "test_plan"
Deletes Channel Plan named 'test_plan'.

Query Response: no query

NOTE Command only applies to customized Channel Plans: Pre-defined Channel Plans can not be deleted.

3.4.3 Channel Plan - Load Channel Plan

:CONFigure:CHPLan:LOAD
:CONFigure:CHPLan:LOAD?

Description: Set command loads named plan as current Channel Plan.
Query command returns name of Channel Plan currently loaded.

Parameter: file name

Default Value: TETRA 380-400 +12.5

Set/Query Format: ascii string | ascii response data

Example: :CONFigure:CHPLan:LOAD “TETRA 380-400 ZERO”
Loads TETRA 380-400 ZERO Channel Plan.

Query Response: :CONFigure:CHPLan:LOAD?
TETRA 380-400 ZERO

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

3.4.4 Channel Plan - New Channel Plan

:CONFigure:CHPLan:NEW

Description: Command creates new Channel Plan.

Parameters: <plan_name>,<frequency band>,<offset>,<duplex spacing>,<reverse operation>,<block 1 data>,<block 2 data>

		Parameter/Range	Format	Default
	Plan Name	20 character max	ascii string	
System Info	**Freq Band**	0 to 15	NR1	
	Offset	0 to 3	NR1	
	Duplex Spacing	0 to 7	NR1	
	Reverse Operation	0 | 1	NR1	
Block 1	**Lowest Channel**	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies
Block 2	**State**	INCL | EXCL	CPD	varies
	Lowest Channel	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies

Example: :CONFigure:CHPlan:NEW
“test_plan”,3,3,0,0,3600,3999,390012500,100000000,2500,EXCL,0,0,0,0,0

NOTE
Default values vary according to selected Channel Plan.
no query

3.5 OFFSETS CONFIGURATION

3.5.1 RF Analyzer - Offset Enable

:CONFigure:OFFSet:ANALyzer:ENABle
:CONFigure:OFFSet:ANALyzer:ENABle?

Description: Set command Enables/Disables the RF Analyzer Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:ANALyzer:ENABle ON
Enables RF Analyzer Offset.

Query Response: :CONFigure:OFFSet:ANALyzer:ENABle?
1

3.5.2 RF Analyzer - Offset Value

:CONFigure:OFFSet:ANALyzer:VALue
:CONFigure:OFFSet:ANALyzer:VALue?

Description: Set command defines the RF Analyzer Offset Value.
Query command returns parameter setting.

Range: -40.0 to +40.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:ANALyzer:VALue -10dB
Sets RF Analyzer Offset to -10.0 dB.

Query Response: :CONFigure:OFFSet:ANALyzer:VALue?
-10.00

3.5.3 RF Generator - Offset Enable

:CONFigure:OFFSet:GENerator:ENABle
:CONFigure:OFFSet:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:GENerator:ENABle ON
Enables RF Generator Offset.

Query Response: :CONFigure:OFFSet:GENerator:ENABle?
1

3.5.4 RF Generator - Offset Value

:CONFigure:OFFSet:GENerator:VALue
:CONFigure:OFFSet:GENerator:VALue?

Description:	Set command defines RF Generator Offset Value. Query command returns parameter setting.
Range:	-40.0 to +40.0 dB
Units:	dB
Default Value:	0.0 dB
Set/Query Format:	NRf | NR2
Example:	:CONFigure:OFFSet:GENerator:VALue 2.5dB Set RF Generator Offset to 2.5 dB.
Query Response:	:CONFigure:OFFSet:GENerator:VALue? 2.5

3.6 RX MEASUREMENTS LIMITS CONFIGURATION

3.6.1 Rx Measurements - Initialize Limits

:LIMits:RXMeas:INITialize

Description: Command Initializes Rx Measurement Limits as Normal or Extreme.

Parameter: STATic | DYNamic

Example: :LIMits:RXMeas:INITialize:PRBS STATIC
Initializes Rx Measurement Limits to Static values.

Query Response: no query

3.6.2 Rx SCH/F - Limit Enable

:LIMits:RXMeas:SCHF:xxx:ENABle
:LIMits:RXMeas:SCHF:xxx:ENABle?

Description: Set command Enables/Disables Limit for specified Rx SCHF Measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal:

BER: OFF

MER: ON

PUEM: OFF

Extreme:

BER: OFF

MER: OFF

PUEM: OFF

Set/Query Format: Boolean

Parameter (xxx): BER | MER | PUEM

Example: :LIMits:RXMeas:SCHF:MER:ENABle ON
Enables Limits for SCHF MER Rx Measurements.

Query Response: :LIMits:RXMeas:SCHF:MER:ENABle?
1

3.6.3 Rx SCH/F - Limit Value

:LIMits:RXMeas:SCHF:xxx:VALue
:LIMits:RXMeas:SCHF:xxx:VALue?

Description: Set command defines Limit Value for specified type of Rx SCHF Measurement. Query command returns parameter setting.

Parameter (xxx): BER | MER | PUEM

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Value:	**Class A**	**Class B**
Default/Normal:		
BER:	4.02600%	0.36600%
MER:	12.20000%	12.20000%
PUEM:	0.03500%	0.03500%
Extreme:		
BER:	4.48000%	2.24000%
MER:	12.32000%	8.96000%
PUEM:	0.03500%	0.03500%

Data Format: <Class A limit>,<Class B limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:SCHF:BER:VALue 5.0,0.5
Sets Limit Value for SCHF BER Class A Rx Measurement to 5% and Class B Rx Measurement to 0.5%.

Query Response: :LIMits:RXMeas:SCHF:BER:VALue?
5.00000,0.50000

3.6.4 Rx STCH - Limit Enable

:LIMits:RXMeas:STCH:xxx:ENABle
:LIMits:RXMeas:STCH:xxx:ENABle?

Description: Set command Enables/Disables Limit for specified Rx STCH Measurement. Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal:

BER: OFF
MER: ON
PUEM: OFF

Extreme:

BER: OFF
MER: OFF
PUEM: OFF

Set/Query Format: Boolean

Parameter (xxx): BER | MER | PUEM

Example: :LIMits:RXMeas:STCH:MER:ENABle ON
Enables Limits for STCH MER Rx Measurements.

Query Response: :LIMits:RXMeas:STCH:MER:ENABle?
1

3.6.5 Rx STCH - Limit Value

:LIMits:RXMeas:STCH:xxx:VALue
:LIMits:RXMeas:STCH:xxx:VALue?

Description: Set command defines Limit Value for specified type of Rx STCH Measurement.
Query command returns parameter setting.

Parameter (xxx): BER | MER | PUEM

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Value:	**Class A**	**Class B**
Default/Normal:		
BER:	4.02600%	0.36600%
MER:	9.760000%	6.10000%
PUEM:	0.03500%	0.03500%
Extreme:		
BER:	4.48000%	2.24000%
MER:	12.32000%	8.96000%
PUEM:	0.03500%	0.03500%

Data Format: <Class A limit>,<Class B limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:STCH:BER:VALue 5.0,0.5
Sets Limit Value for STCH BER Class A Rx Measurement to 5% and Class B Rx Measurement to 0.5%.

Query Response: :LIMits:RXMeas:STCH:BER:VALue?
5.00000,0.50000

3.6.6 Rx TCH/2.4 BER - Limit Enable

:LIMits:RXMeas:TCH2:BER:ENABle
:LIMits:RXMeas:TCH2:BER:ENABle?

Description: Set command Enables/Disables Limit for specified Rx TCH/2.4 BER Measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:TCH2:BER:ENABle ON
Enables Limits for TCH/2.4 BER Rx Measurements.

Query Response: :LIMits:RXMeas:TCH2:BER:ENABle?
1

3.6.7 Rx TCH/2.4 BER - Limit Value

:LIMits:RXMeas:TCH2:BER:VALue
:LIMits:RXMeas:TCH2:BER:VALue?

Description: Set command defines Limit Value for Rx TCH/2.4 BER Measurement.
Query command returns parameter setting.

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**
Default/Normal:	0.24400%	0.01220%
Extreme:	1.45600%	0.39200%

Data Format: <Class A limit>,<Class B limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:TCH2:BER:VALue 0.5,0.25
Sets Limit Value for TCH/2.4 BER Class A Rx Measurement to 0.5% and Class B Rx Measurement to 0.25%.

Query Response: :LIMits:RXMeas:TCH2:BER:VALue?
0.50000,0.25000

3.6.8 Rx TCH/7.2 BER - Limit Enable

:LIMits:RXMeas:TCH7:BER:ENABle
:LIMits:RXMeas:TCH7:BER:ENABle?

Description: Set command Enables/Disables Limit for specified Rx TCH/7.2 BER Measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:TCH7:BER:ENABle ON
Enables Limits for TCH/7.2 BER Rx Measurements.

Query Response: :LIMits:RXMeas:TCH7:BER:ENABle?
1

3.6.9 Rx TCH/7.2 BER - Limit Value

:LIMits:RXMeas:TCH7:BER:VALue
:LIMits:RXMeas:TCH7:BER:VALue?

Description: Set command defines Limit Value for Rx TCH/7.2 BER Measurement.
Query command returns parameter setting.

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**
Default/Normal:	3.66000%	4.88000%
Extreme:	4.48000%	2.46400%

Data Format: <Class A limit>,<Class B limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:TCH7:BER:VALue 5.0,6.5
Sets Limit Value for TCH/7.2 BER Class A Rx Measurement to 5.0% and Class B Rx Measurement to 6.0%.

Query Response: :LIMits:RXMeas:TCH7:BER:VALue?
5.00000,6.50000

3.7 SYSTEM ID & SYNC CONFIGURATION

3.7.1 System ID & Sync Parameters - Base Station Auto Sync Path Offset

:CONFigure:SYNC:AUTO:OFFSet
:CONFigure:SYNC:AUTO:OFFSet?

Description: Set command defines Auto Sync Path Offset value.
Query command returns parameter setting.

Range: -9999.99 to +9999.99 symbols

Units: symbols

Default Value: 0.00 symbols

Set/Query Format: NRf | NR2

Example: :CONFigure:SYNC:AUTO:OFFSet 100
Sets Base Station Auto Sync Path Offset value to 100 symbols.

Query Response: :CONFigure:SYNC:AUTO:OFFSet?
100.00

3.7.2 System ID & Sync Parameters - Base Station Color Code

:CONFigure:BSIDentity:BCC
:CONFigure:BSIDentity:BCC?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.

Range: 0 to 63

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:BSIDentity:BCC 50
Sets Base Station Color Code to 50.

Query Response: :CONFigure:BSIDentity:BCC?
50

3.7.3 System ID & Sync Parameters - Base Station Mobile Country Code

:CONFigure:BSIDentity:MCC
:CONFigure:BSIDentity:MCC?

Description: Set command defines Base Station Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 999

Default Value: 1 (Test)

Set/Query Format: NR1

Example: :CONFigure:BSIDentity:MCC 234
Sets Base Station Mobile Country Code to 234 (United Kingdom).

Query Response: :CONFigure:BSIDentity:MCC?
234

3.7.4 System ID & Sync Parameters - Base Station Mobile Network Code

:CONFigure:BSIDentity:MNC
:CONFigure:BSIDentity:MNC?

Description: Set command defines Base Station Mobile Country Code.
Query command returns parameter setting.
Range: 0 to 16383
Default Value: 1
Set/Query Format: NR1
Example: :CONFigure:BSIDentity:MNC 1234
Sets Base Station Mobile Network Code to 1234.
Query Response: :CONFigure:BSIDentity:MNC?
1234

3.7.5 System ID & Sync Parameters - Base Station Sync Mode of Operation

:CONFigure:SYNC:MODE
:CONFigure:SYNC:MODE?

Description: Set command defines Base Station Sync mode of operation.
Query command returns parameter setting.
Parameter: AUTO | PULSe
Default Value: Auto
Set/Query Format: CPD | CRD
Example: :CONFigure:SYNC:MODE PULSE
Sets Base Station Sync mode of operation to Pulse.
Query Response: :CONFigure:SYNC:MODE?
PULS

3.7.6 System ID & Sync Parameters - Base Station Pulse Mode Offset

:CONFigure:SYNC:PULSe:OFFSet
:CONFigure:SYNC:PULSe:OFFSet?

Description: Set command defines Pulse Mode Offset value.
Query command returns parameter setting.
Range: 0 to 1.020000 seconds
Units: seconds
Default Value: 0.00 seconds
Set/Query Format: NRf | NR2
Example: :CONFigure:SYNC:PULSe:OFFSet 0.0025
Sets Base Station Pulse Offset value to 0.0025 seconds.
Query Response: :CONFigure:SYNC:PULSe:OFFSet?
0.002500

3.7.7 System ID & Sync Parameters - Base Station Sync Pulse Edge

:CONFigure:SYNC:PULSe:EDGE
:CONFigure:SYNC:PULSe:EDGE?

Description: Set command defines Base Station Sync Pulse Edge mode of operation.
Query command returns parameter setting.

Parameter: RISing | FALLing

Default Value: RISing

Set/Query Format: CPD | CRD

Example: :CONFigure:SYNC:PULSe:EDGE FALLING
Sets Base Station Sync Pulse Edge mode of operation to Falling.

Query Response: :CONFigure:SYNC:PULSe:EDGE?
FALL

3.7.8 System ID & Sync Parameters - Base Station Update Mode of Operation

:CONFigure:BSIDentity:UPDate
:CONFigure:BSIDentity:UPDate?

Description: Set command defines Base Station Update mode of operation.
Query command returns parameter setting.

Parameter: AUTO | MANual

Default Value: AUTO

Set/Query Format: CPD | CRD

Example: :CONFigure:BSIDentity:UPDate MANUAL
Sets Base Station Update mode of operation to Manual.

Query Response: :CONFigure:BSIDentity:BSIDentity:UPDate?
MAN

3.8 TX MEASUREMENTS LIMITS CONFIGURATION

3.8.1 Tx Measurements - Initialize Limits

:LIMits:TXMeas:INITialize:xxx

Description: Command Initializes Tx Measurement Limits as Normal or Extreme.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Parameter: NORMal | EXTReme

Example: :LIMits:TXMeas:INITialize:PRBS NORMAL
Initializes Tx Measurement Limits to Normal.

Query Response: no query

3.8.2 Tx Burst Power - Limit Enable

:LIMits:TXMeas:POWer:ENABle:xxx
:LIMits:TXMeas:POWer:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

DEfault/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:POWer:ENABle:PRBS ON
Enables Limit for Tx Burst Power PRBS burst measurements.

Query Response: :LIMits:TXMeas:POWer:ENABle:PRBS?
1

3.8.3 Tx Burst Power - Limit Value

:LIMits:TXMeas:POWer:VALue:xxx
:LIMits:TXMeas:POWer:VALue:xxx?

Description: Set command defines Limits for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Range: -9.9 to +9.9 dB

Units: dB

Default Values:

Default/Normal:

Upper Limit Value: +2.0 dB

Lower Limit Value: -2.0 dB

Extreme:

Upper Limit Value: +3.0 dB

Lower Limit Value: -4.0 dB

Set/Query Format: data string (NRf) | data string (NR2)

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:POWer:VALue:PRBS 5.0,-5.0
Sets Upper Limit Value for Tx Burst Power PRBS burst measurements to 5.0 dB and Lower Limit for Tx Burst Power PRBS burst measurements to -5.0 dB.

Query Response: :LIMits:TXMeas:POWer:VALue:PRBS?
5.0,-5.0

3.8.4 Tx Frequency Error - Limit Enable

:LIMits:TXMeas:FERRor:ENABle:xxx
:LIMits:TXMeas:FERRor:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:FERRor:ENABle:PRBS ON
Enables Limit for Tx Frequency Error Measurements for PRBS bursts.

Query Response: :LIMits:TXMeas:FERRor:ENABle:PRBS?
1

3.8.5 Tx Frequency Error - Limit Value

:LIMits:TXMeas:FERRor:VALue:xxx
:LIMits:TXMeas:FERRor:VALue:xxx?

Description: Set command defines Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.0001 to 9.9999 ppm

Units: ppm

Default Value: 0.2000 ppm

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:FERRor:VALue:PRBS 0.5ppm
Sets Limit Value for Tx Frequency Error Measurements PRBS burst to 0.5 ppm.

Query Response: :LIMits:TXMeas:FERRor:VALue:PRBS?
0.5

3.8.6 Tx Residual Carrier - Limit Enable

:LIMits:TXMeas:RCARrier:ENABle:xxx
:LIMits:TXMeas:RCARrier:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:RCARrier:ENABle:PRBS ON
Enables Limit for Tx Residual Carrier Measurements for PRBS bursts.

Query Response: :LIMits:TXMeas:RCARrier:ENABle:PRBS?
1

3.8.7 Tx Residual Carrier - Limit Value

:LIMits:TXMeas:RCARrier:VALue:xxx
:LIMits:TXMeas:RCARrier:VALue:xxx?

Description: Set command defines Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 5.0%

Extreme: 5.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:RCARrier:VALue:SYNC 5.0
Sets Limit Value for Tx Residual Carrier Sync Burst measurements to 5.0%.

Query Response: :LIMits:TXMeas:RCARrier:VALue:SYNC?
5.0

3.8.8 Tx Vector Peak - Limit Enable

:LIMits:TXMeas:VPEak:ENABle:xxx
:LIMits:TXMeas:VPEak:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VPEak:ENABle:PRBS ON
Enables Limit for Tx Vector Peak Measurements for PRBS bursts.

Query Response: :LIMits:TXMeas:VPEak:ENABle:PRBS?
1

3.8.9 Tx Vector Peak - Limit Value

:LIMits:TXMeas:VPEak:VALue:xxx
:LIMits:TXMeas:VPEak:VALue:xxx?

Description: Set command defines Limit for Tx Vector Peak Measurement for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 30.0%

Extreme: 30.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VPEak:VALue:PRBS 15.0
Sets Limit Value for Tx Vector Peak PRBS burst measurements to 15.0%.

Query Response: :LIMits:TXMeas:VPEak:VALue:PRBS?
15.0

3.8.10 Tx Vector RMS - Limit Enable

:LIMits:TXMeas:VRMS:ENABle:xxx
:LIMits:TXMeas:VRMS:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector RMS Measurement for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VRMS:ENABle:PRBS ON
Enables Limit for Tx Vector RMS Measurement for PRBS bursts.

Query Response: :LIMits:TXMeas:VRMS:ENABle:PRBS?
1

3.8.11 Tx Vector RMS - Limit Value

:LIMits:TXMeas:VRMS:VALue:xxx
:LIMits:TXMeas:VRMS:VALue:xxx?

Description: Set command defines Limit for Tx Vector RMS Measurement for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 10.0%

Extreme: 10.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :LIMits:TXMeas:VRMS:VALue:PRBS 5.0
Sets Limit Value for Tx Vector RMS PRBS burst measurements to 5.0%.

Query Response: :LIMits:TXMeas:VRMS:VALue:PRBS?
5.0

3.9 CONTROL TEST TILE

3.9.1 Base Station - Detected T1 Type

:PROTocol:TYPE:DETected?

Description: Command returns Detected T1 Type.

Query Data: <statusbyte>,<type>

statusbyte (NR1): 0 = Valid and can be generated
1 = Invalid(i.e. type has not been detected)
2 = Valid but can not be generated

T1 Type (NR1): 0 to 31 (when Valid)

Query Response: :PROTocol:TYPE:DETected?
1,36

3.9.2 Base Station - Expected T1 Type

:PROTocol:TYPE:EXPected
:PROTocol:TYPE:EXPected?

Description: Set command defines Expected T1 Type.
Query command returns parameter setting.

Parameter: LOOPback | TCH7L | SCHF | STCH | TCH2 | TCH7P | PRBS18 | PRBSF | PRBSUF

Default Value: TCH7P (TCH/7.2 PRBS)

Set Format: CPD | CRD

Query Data: <statusbyte>,<type>

statusbyte (NR1): 0 = Can synchronize generator
1 = Can not synchronize generator

T1 Type (CRD): T1 Type

Example: :PROTocol:TYPE:EXPected TCH7P
Sets Expected T1 Type to TCH/7.2 PRBS

Query Response: :PROTocol:TYPE:EXPected?
0,TCH7P

3.9.3 Base Station - Generator Sync Status

:PROTocol:TYPE:GSYNc?

Description: Command returns Sync status of RF Generator.

Query Data: <statusbyte>,<state>

statusbyte (NR1): 0 = Valid
1 = Invalid

state (CRD): SYNC | NSYN (when Valid) otherwise, INVALID

Query Response: :PROTocol:TYPE:GSYNc?
0,NSYN

3.9.4 Base Station - Generator T1 Type

:PROTocol:TYPE:GENerator
:PROTocol:TYPE:GENerator?

Description: Set command defines Generator T1 Type.
Query command returns parameter setting.

Parameter: DETected | TCH7 | SCHF | STCH | TCH2 | PRBS18 | PRBSF | PRBSUF

Default Value: TCH7 (TCH/7.2)

Set Format: CPD | CRD

Query Data: <statusbyte>,<type>

statusbyte (NR1): 0 = Can synchronize generator
1 = Can not synchronize generator

Gen T1 Type (CRD): Gen T1 Type

Example: :PROTocol:TYPE:GENerator TCH7
Sets Generator T1 Type to TCH7.

Query Response: :PROTocol:TYPE:GENerator?
0,TCH7

3.9.5 Base Station - Identity

:PROTocol:BSIDentity?

Description: Command returns Base Station Protocol information.

Query Data: <statusbyte>,<MCC>,<MNC>,<BCC>,<LA>

statusbyte (NR1): 0 = Valid Base Station Identity
1 = Invalid Base Station Identity

MCC (NR1): 0 to 999

MNC (NR1): 0 to 16383

BCC (NR1): 0 to 63

LA (NR1): 0 to 16383

Query Response: :PROTocol:BSIDentity?
1,0,0,0

3.9.6 Duplex Spacing - Mode of Operation

:RF:DUPLex:LOCK
:RF:DUPLex:LOCK?

Description: Set command defines Duplex Spacing Mode of Operation.
Query command returns parameter setting.

Parameter: UNLocked | LOCKed

Default Value: LOCKED

Set/Query Format: CPD | CRD

Example: :RF:DUPLex:LOCK UNLOCKED
Sets Duplex Mode of Operation to Unlocked.

Query Response: :RF:DUPLex:LOCK?
UNL

NOTE Command is only valid when No Plan is selected as the Channel Plan.

3.9.7 Duplex Spacing - Offset Value

:RF:DUPLex:SPACing
:RF:DUPLex:SPACing?

Description: Set command defines the RF Duplex Spacing.
Query command returns parameter setting.

Range: -999.0 to +999.0 MHz

Units: Hz | kHz | MHz | GHz

Default Value: 10.0 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:DUPLex:SPACing 15MHz
Sets Duplex Spacing to 15.0 MHz.

Query Response: :RF:DUPLex:SPACing?
15000000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

3.9.8 RF Analyzer - Automatic Gain Control

:RF:ANALyzer:AGC
:RF:ANALyzer:AGC?

Description: Set command Enables/Disables the AGC mode of operation.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:ANALyzer:AGC OFF
Disables Automatic Gain Control.

Query Response: :RF:ANALyzer:AGC?
0

3.9.9 RF Analyzer - Input Connector

:RF:ANALyzer:PORT
:RF:ANALyzer:PORT?

Description: Set command selects the RF Input Connector.
Query command returns parameter setting.

Parameter: TR | ANT

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:PORT ANT
Selects Antenna Connector as RF Input Connector.

Query Response: :RF:ANALyzer:PORT?
ANT

NOTE Refer to 3900 Platform Specifications for maximum input values.

3.9.10 RF Analyzer - Power Level

:RF:ANALyzer:LEVel
:RF:ANALyzer:LEVel?

Description: Set command defines RF Analyzer Level.
Query command returns parameter setting.

Range: **TR:** -40.0 to +55.0 dBm in 5 dB steps
GEN: -80.0 to 0.0 dBm in 5 dB steps

Units: dBm

Default Value: 40.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:ANALyzer:LEVel -20dBm
Sets RF Analyzer Level to -20.0 dBm.

Query Response: :RF:ANALyzer:LEVel?
-20.0

3.9.11 RF Analyzer - Pre-Amplifier

:RF:ANALyzer:RECeiver:AMP
:RF:ANALyzer:RECeiver:AMP?

Description: Set command Enables/Disables Receiver Pre-AMP.
Query command returns On/Off state of Receiver Pre-AMP.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :RF:ANALyzer:RECeiver:AMP ON
Enables Receive Pre-Amplifier.

Query Response: :RF:ANALyzer:RECeiver:AMP?
1

3.9.12 RF Analyzer - Receive Frequency

:RF:ANALyzer:FREQuency
:RF:ANALyzer:FREQuency?

Description: Set command defines the RF Analyzer Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units : Hz | kHz | MHz | GHz

Default Value: 390.0 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:ANALyzer:FREQuency 400MHz
Sets RF Analyzer Frequency to 400.0 MHz.

Query Response: :RF:ANALyzer:FREQuency?
400000000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

3.9.13 RF Analyzer - Receive Frequency

:RF:ANALyzer:FREQuency
:RF:ANALyzer:FREQuency?

Description: Set command defines the RF Analyzer Frequency.
Query command returns parameter setting.
Range: 100.0 kHz to 2.71 GHz
Units : Hz | kHz | MHz | GHz
Default Value: 390.0 MHz
Set/Query Format: NRf | NR1 (Hz)
Example: :RF:ANALyzer:FREQuency 400MHz
Sets RF Analyzer Frequency to 400.0 MHz.
Query Response: :RF:ANALyzer:FREQuency?
400000000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

3.9.14 RF Analyzer - RF Channel

:RF:CHANnel
:RF:CHANnel?

Description: Set command defines RF Channel.
Query command returns parameter setting.
Range: defined be selected Channel Plan
Default Value: defined be selected Channel Plan
Set/Query Format: NR1
Example: :RF:CHANnel 3700
Sets RF Channel to 3700.
Query Response: :RF:CHANnel?
3700

3.9.15 RF Generator - Enable

:RF:GENerator:STATe
:RF:GENerator:STATe?

Description: Set command Enables/Disables RF Generator.
Query command returns parameter setting.
Parameter: OFF | ON | 0 | 1
Default Value: ON
Set/Query Format: Boolean
Example: :RF:GENerator:STATe ON
Enables RF Generator.
Query Response: :RF:GENerator:STATe?
1

3.9.16 RF Generator - Frequency

:RF:GENerator:FREQuency
:RF:GENerator:FREQuency?

Description: Set command defines RF Generator Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units: Hz | kHz | MHz | GHz

Default Value: 380.00 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:GENerator:FREQuency 400MHz
Sets RF Generator Frequency to 400.0 MHz.

Query Response: :RF:GENerator:FREQuency?
400000000

3.9.17 RF Generator - Level

:RF:GENerator:LEVel
:RF:GENerator:LEVel?

Description: Set command defines RF Generator Level.
Query command returns parameter setting.

Range: **TR:** -130.0 to -40.0 dBm
GEN: -130.0 to 0.0 dBm

Units: dBm

Default Value: -75.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:GENerator:LEVel -40dBm
Sets RF Generator Level to -40.0 dBm.

Query Response: :RF:GENerator:LEVel?
-40.0

3.9.18 RF Generator - Modulator Enable

:RF:GENerator:MODulator
:RF:GENerator:MODulator?

Description: Set command Enables/Disables Modulation Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:MODulator ON
Enables Modulation Generator.

Query Response: :RF:GENerator:MODulator?
1

3.9.19 RF Generator - Output Connector

:RF:GENerator:PORT
:RF:GENerator:PORT?

Description: Set command selects the RF Output Connector.
Query command returns parameter setting.

Parameter: TR | GEN

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:GENerator:PORT GEN
Selects Generator Connector as RF Output Connector.

Query Response: :RF:GENerator:PORT?
GEN

3.10 MODULATION ACCURACY - MAGNITUDE ERROR

3.10.1 Magnitude Error - Measurement Query at Symbol

:FETCh:MACCuracy:MERRor:xxx? p

Description: Command returns Magnitude Error measurement for burst type at symbol point.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Parameter (p): symbol range: 0 to 255 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:MERRor:TS12? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

3.10.2 Magnitude Error - Symbol Range

:FETCh:MACCuracy:MERRor:RANGe:xxx?

Description: Command returns minimum and maximum range values for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:MERRor:RANGe:PRBS?
0,-23,232

NOTE Statusbyte may return more than one condition as a bitmask.

3.11 MODULATION ACCURACY - PHASE ERROR

3.11.1 Phase Error - Measurement Query at Symbol

:FETCh:MACCuracy:PERRor:xxx? p

Description: Command returns Phase Error measurement for burst type at symbol point.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Parameter (p): symbol range: 0 to 255 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): degree

Query Response: :FETCh:MACCuracy:PERRor:TS12? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

3.11.2 Phase Error - Symbol Range

:FETCh:MACCuracy:PERRor:RANGe:xxx?

Description: Command returns minimum and maximum range values for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:PERRor:RANGe:PRBS?
0,-23,232

NOTE Statusbyte may return more than one condition as a bitmask.

3.12 MODULATION ACCURACY - VECTOR ERROR

3.12.1 Vector Error - Measurement Query at Symbol

:FETCh:MACCuracy:VERRor:xxx? p

Description: Command returns Vector Error measurement for burst type at symbol point.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Parameter (p): symbol range: 0 to 255 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:VERRor:TS12? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

3.12.2 Vector Error - Symbol Range

:FETCh:MACCuracy:VERRor:RANGe:xxx?

Description: Command returns minimum and maximum range values for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:VERRor:RANGe:PRBS?
0,-23,232

NOTE Statusbyte may return more than one condition as a bitmask.

3.13 RX MEASUREMENTS TEST TILE

3.13.1 Rx Measurements - Continuous Sweep

:INITiate:CONTinuous:RXMeas
:INITiate:CONTinuous:RXMeas?

Description: Command initiates Continuous Rx Measurement sweeps.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Set/Query Format: Boolean

Default Value: ON

Example: :INITiate:CONTinuous:RXMeas ON
Enables continuous Rx Measurement sweeps.

Query Response: :INITiate:CONTinuous:RXMeas?
1

3.13.2 Rx Measurements - Single Sweep

:INITiate:IMMediate:RXMeas

Description: Command initiates Single Rx Measurements.

Parameter/Query: none

3.13.3 Rx Measurements - Stop Measurements

:ABORt:RXMeas

Description: Command stops Rx Measurements for specified burst type.

Parameter/Query: none

3.13.4 Rx Measurements - T1 Type Query

:FETCh:RXMeas:TYPE?

Description: Command returns T1 Type.

Query Data: <statusbyte>,<T1 type>

statusbyte (NR1): 0 = Valid
1 = Invalid

T1 type (CPD): TYP7 | TYP8 | TYP9 | TYP10 | PRBS7 | PRBS18 | PRBSF | PRBSU

Query Response: :FETCh:RXMeas:TYPE?
1,TYP7

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.5 PRBS7 BER - Measurement Query

:FETCh:RXMeas:PRBS7:BER?

Description: Command returns BER measurement for PRBS7 burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:PRBS7:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.6 PRBS7 BER - Sample Count

:CONFigure:RXMeas:SAMPle:PRBS7:BER
:CONFigure:RXMeas:SAMPle:PRBS7:BER?

Description: Sets the number of samples used to calculate PRBS7 BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 10,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:PRBS7:BER 250000
Sets the number of samples used to calculate PRBS7 BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:PRBS7:BER?
250000

3.13.7 PRBS18 BER - Measurement Query

:FETCh:RXMeas:PRBS18:BER?

Description: Command returns BER measurement for PRBS18 burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:PRBS18:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.8 PRBS18 BER - Sample Count

:CONFigure:RXMeas:SAMPle:PRBS18:BER
:CONFigure:RXMeas:SAMPle:PRBS18:BER?

Description: Sets the number of samples used to calculate PRBS18 BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 10,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:PRBS18:BER 250000
Sets the number of samples used to calculate PRBS18 BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:PRBS18:BER?
250000

3.13.9 PRBSF BER - Measurement Query

:FETCh:RXMeas:PRBSF:BER?

Description: Command returns BER measurement for PRBSF burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:PRBSF:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.10 PRBSF BER - Sample Count

:CONFigure:RXMeas:SAMPle:PRBSF:BER
:CONFigure:RXMeas:SAMPle:PRBSF:BER?

Description: Sets the number of samples used to calculate PRBSF BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 10,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:PRBSF:BER 250000
Sets the number of samples used to calculate PRBSF BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:PRBSF:BER?
250000

3.13.11 PRBSU BER - Query Measurement

:FETCh:RXMeas:PRBSU:BER?

Description: Command returns BER measurement for PRBSU burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:PRBSU:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.12 PRBSU BER - Sample Count

:CONFigure:RXMeas:SAMPle:PRBSU:BER
:CONFigure:RXMeas:SAMPle:PRBSU:BER?

Description: Sets the number of samples used to calculate PRBSU BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 10,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:PRBSU:BER 250000
Sets the number of samples used to calculate PRBSU BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:PRBSU:BER?
250000

3.13.13 SCHF BER - Measurement Query

:FETCh:RXMeas:SCHF:BER?

Description: Command returns BER measurement for SCHF burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHF:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.14 SCHF BER - Sample Count

:CONFigure:RXMeas:SAMPle:SCHF:BER
:CONFigure:RXMeas:SAMPle:SCHF:BER?

Description: Sets the number of samples used to calculate SCHF BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 6,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHF:BER 250000
Sets the number of samples used to calculate SCHF BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHF:BER?
250000

3.13.15 SCHF MER - Measurement Query

:FETCh:RXMeas:SCHF:MER?

Description: Command returns MER measurement for SCHF burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<MER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

MER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHF:MER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.16 SCHF MER - Sample Count

:CONFigure:RXMeas:SAMPle:SCHF:MER
:CONFigure:RXMeas:SAMPle:SCHF:MER?

Description: Sets the number of samples used to calculate SCHF MER Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 6600

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHF:MER 25000
Sets the number of samples used to calculate SCHF MER Measurements to 25,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHF:MER?
25000

3.13.17 SCHF PUEM - Measurement Query

:FETCh:RXMeas:SCHF:PUEM?

Description: Command returns PUEM measurement for SCHF burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<PUEM%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

PUEM (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHF:PUEM?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.18 SCHF PUEM - Sample Count

:CONFigure:RXMeas:SAMPle:SCHF:PUEM
:CONFigure:RXMeas:SAMPle:SCHF:PUEM?

Description: Sets the number of samples used to calculate SCHF PUEM Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 31200

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHF:PUEM 25000
Sets the number of samples used to calculate SCHF PUEM Measurements to 25,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHF:PUEM?
25000

3.13.19 STCH BER - Measurement Query

:FETCh:RXMeas:STCH:BER?

Description: Command returns BER measurement for STCH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:STCH:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.20 STCH BER - Sample Count

:CONFigure:RXMeas:SAMPle:STCH:BER
:CONFigure:RXMeas:SAMPle:STCH:BER?

Description: Sets the number of samples used to calculate STCH BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 3,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:STCH:BER 250000
Sets the number of samples used to calculate STCH BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:STCH:BER?
250000

3.13.21 STCH MER - Measurement Query

:FETCh:RXMeas:STCH:MER?

Description: Command returns MER measurement for STCH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<MER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

MER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:STCH:MER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.22 STCH MER - Sample Count

:CONFigure:RXMeas:SAMPle:STCH:MER
:CONFigure:RXMeas:SAMPle:STCH:MER?

Description: Sets the number of samples used to calculate STCH MER Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 6600

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:STCH:MER 7500
Sets the number of samples used to calculate STCH MER Measurements to 7500.

Query Response: :CONFigure:RXMeas:SAMPle:STCH:MER?
7500

3.13.23 STCH PUEM - Measurement Query

:FETCh:RXMeas:STCH:PUEM?

Description: Command returns PUEM measurement for STCH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<PUEM%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

PUEM (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:STCH:PUEM?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.24 STCH PUEM - Sample Count

:CONFigure:RXMeas:SAMPle:STCH:PUEM
:CONFigure:RXMeas:SAMPle:STCH:PUEM?

Description: Sets the number of samples used to calculate STCH PUEM Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 31200

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:STCH:PUEM 750,000
Sets the number of samples used to calculate STCH PUEM Measurements to 750,000.

Query Response: :CONFigure:RXMeas:SAMPle:STCH:PUEM?
750000

3.13.25 TCH/2.4 BER - Measurement Query

:FETCh:RXMeas:TCH2:BER?

Description: Command returns BER measurement for TCH/2.4 burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCH2:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.26 TCH/2.4 BER - Sample Count

:CONFigure:RXMeas:SAMPle:TCH2:BER
:CONFigure:RXMeas:SAMPle:TCH2:BER?

Description: Sets the number of samples used to calculate TCH/2.4 BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 3,500,000

Default Value: 160000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:TCH2:BER 250000
Sets the number of samples used to calculate TCH/2.4 BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:TCH2:BER?
250000

3.13.27 TCH/7.2 BER - Measurement Query

:FETCh:RXMeas:TCH7:BER?

Description: Command returns BER measurement for TCH/7.2 burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B

BER (NR2) %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCH7:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

3.13.28 TCH/7.2 BER - Sample Count

:CONFigure:RXMeas:SAMPle:TCH7:BER
:CONFigure:RXMeas:SAMPle:TCH7:BER?

Description: Sets the number of samples used to calculate TCH/7.2 BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 10,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:TCH7:BER 250000
Sets the number of samples used to calculate TCH/7.2 BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:TCH7:BER?
250000

3.14 TX MEASUREMENTS TEST TILE

3.14.1 Tx Measurements - Continuous Sweep

:INITiate:CONTinuous:TXMeas:xxx
:INITiate:CONTinuous:TXMeas:xxx

Description: Set command initiates Continuous Tx Measurement sweeps for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Set/Query Format: Boolean

Default Value: OFF

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Example: :INITiate:CONTinuous:TXMeas:PRBS ON
Enables continuous Tx Measurement sweeps for PRBS burst.

Query Response: :INITiate:CONTinuous:TXMeas:PRBS?
1

3.14.2 Tx Measurements - Single Sweep

:INITiate:IMMediate:TXMeas:xxx

Description: Command initiates Single Tx Measurements sweep for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query: none

3.14.3 Tx Measurements - Stop Measurements

:ABORt:TXMeas:xxx

Description: Command stops Tx Measurements for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Response: no query

3.14.4 Frequency Error - Measurement Query

:FETCh:MACCuracy:FERRor:xxx?

Description: Command returns Frequency Error measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR2): Hz

Query Response: :FETCh:MACCuracy:FERRor:PRBS?
0,0,20,0.1,0.4,-0.3,0.4

NOTE Statusbyte may return more than one condition as a bitmask.

3.14.5 Frequency Error - Sample Count

:CONFigure:MACCuracy:FERRor:SAMPle:xxx
:CONFigure:MACCuracy:FERRor:SAMPle:xxx?

Description: Sets number of samples used to calculate Frequency Error measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Sample Range: 1 to 250

Default Value: 20

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Set/Query Format: NR1

Example: :CONFigure:MACCuracy:FERRor:SAMPle:PRBS 50
Sets number of samples used to calculate Frequency Error PRBS Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:FERRor:SAMPle:PRBS?
50

3.14.6 Residual Carrier - Measurement Query

:FETCh:MACCuracy:RCARrier:xxx?

Description: Command returns Residual Carrier measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:RCARrier:PRBS?
0,0,20,0.1,0.1

NOTE Statusbyte may return more than one condition as a bitmask.

3.14.7 Residual Carrier - Sample Count

:CONFigure:MACCuracy:RCARrier:SAMPle:xxx
:CONFigure:MACCuracy:RCARrier:SAMPle:xxx?

Description: Sets number of samples used to calculate Residual Carrier measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Sample Range: 1 to 250

Default Value: 20

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Set/Query Format: NR1

Example: :CONFigure:MACCuracy:RCARrier:SAMPle:PRBS 50
Sets number of samples used to calculate Residual Carrier PRBS Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:RCARrier:SAMPle:PRBS?
50

3.14.8 Tx Power - Measurement Query

:FETCh:POWer:xxx?

Description: Command returns Tx Power measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit

sample count (NR1): value

avg, max, min (NR2): dBm

Query Response: :FETCh:POWer:PRBS?
0,7,20,-5.4,-5.4,-5.4

NOTE Statusbyte may return more than one condition as a bitmask.

3.14.9 Tx Power - Sample Count

:CONFigure:POWer:SAMPle:xxx
:CONFigure:POWer:SAMPle:xxx?

Description: Sets number of samples used to calculate Tx Power measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Sample Range: 1 to 250

Default Value: 20

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Set/Query Format: NR1

Example: :CONFigure:POWer:SAMPle:PRBS 50
Sets number of samples used to calculate Tx Power PRBS Burst measurements to 50.

Query Response: :CONFigure:POWer:SAMPle:PRBS?
50

3.14.10 Vector Peak - Measurement Query

:FETCh:MACCuracy:VPEak:xxx?

Description: Command returns Vector Peak measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:VPEak:PRBS?
0,0,20,2.9,3.8

NOTE Statusbyte may return more than one condition as a bitmask.

3.14.11 Vector Peak - Sample Count

:CONFigure:MACCuracy:VPEak:SAMPle:xxx
:CONFigure:MACCuracy:VPEak:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector Peak measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Sample Range: 1 to 250

Default Value: 20

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Set/Query Format: NR1

Example: :CONFigure:MACCuracy:VPEak:SAMPle:PRBS 50
Sets number of samples used to calculate Vector Peak PRBS Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VPEak:SAMPle:PRBS?
50

3.14.12 Vector RMS - Measurement Query

:FETCh:MACCuracy:VRMS:xxx?

Description: Command returns Vector RMS measurement for specified burst type.

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:VRMS:PRBS?
0,0,20,1.1,1.4

NOTE Statusbyte may return more than one condition as a bitmask.

3.14.13 Vector RMS - Sample Count

:CONFigure:MACCuracy:VRMS:SAMPle:xxx
:CONFigure:MACCuracy:VRMS:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector RMS measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Sample Range: 1 to 250

Default Value: 20

Burst Type (xxx): PRBS | SYNC | TS1 | TS2 | TS12

Set/Query Format: NR1

Example: :CONFigure:MACCuracy:VRMS:SAMPle:PRBS 50
Sets number of samples used to calculate Vector RMS PRBS Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VRMS:SAMPle:PRBS?
50

Chapter 4 - TEDS BS T4 Remote Commands

4.1 INTRODUCTION

This chapter lists the Remote Commands for configuring TEDS BS T4 System Parameters. Remote Commands are listed alphabetically under the following Display Tile headings:

4.2 BS PARAMETERS

4.2.1 Base Parameters - Power Class

:BS:POWer:CLASs
:BS:POWer:CLASs?

Description: Set command defines Base Station Power Class.
Query command returns parameter setting.

Parameter: 1 to 10

where:
1 = 46.0 dBm / 40.0 W
2 = 44.0 dBm / 25.0 W
3 = 42.0 dBm / 15.0 W
4 = 40.0 dBm / 10.0 W
5 = 38.0 dBm / 6.3 W
6 = 36.0 dBm / 4.0 W
7 = 34.0 dBm / 2.5 W
8 = 32.0 dBm / 1.6 W
9 = 30.0 dBm / 1.0 W
10 = 28.0 dBm / 600.0 mW

Default Value: 1 (46.0 dBm / 40.0 W)

Set/Query Format: CPD | CRD

Example: :BS:POWer:CLASs 4
Sets Power Class to 40.0 dBm / 10.0 W.

Query Response: :BS:POWer:CLASs?
4

4.3 CHANNEL PLAN CONFIGURATION

4.3.1 Channel Plan - Block 1 or 2 Bandwidth

CHPlan:CB<n>:BANDwidth
CHPlan:CB<n>:BANDwidth?

Description: Set command defines Channel Plan Bandwidth for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Parameter: 0 | 1

where: 0 = 25 kHz
1 = 50 kHz

Default Value: 0

Set/Query Format: NR1

Example: CHPlan:CB1:BANDwidth 1
Sets Channel Plan Block 1 Bandwidth to 50 kHz.

Query Response: CHPlan:CB1:BANDwidth?
1

4.3.2 Channel Plan - Block 1 or 2 Channel Spacing

:CHPLan:CB<n>:CHannel:SPACing
:CHPLan:CB<n>:CHannel:SPACing?

Description: Set command defines Channel Spacing for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Range: 5 to 500 kHz

Units: kHz

Default Value: 0.0 kHz

Set/Query Format: NRf | NR2

Example: :CHPLan:CB1:CHannel:SPACing 25kHz
Sets Channel Block 1 Channel Spacing to 25 kHz.

Query Response: :CHPLan:CB1:CHannel:SPACing?
25.000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.3.3 Channel Plan - Block 1 or 2 Duplex Offset

CHPlan:CB<n>:DUPLex:OFFSet
CHPlan:CB<n>:DUPLex:OFFSet?

Description: Set command defines Channel Plan Duplex Offset for indicated Channel Block. Query command returns parameter setting.
CB<n>: where CB<n> indicates Channel Block 1 or 2
<n>: 1 | 2
Range: -100.0 to +100.0 MHz
Units: MHz
Default Value: 0.0 MHz
Set/Query Format: NRf | NR2
Example: CHPlan:CB1:DUPLex:OFFSet 5MHZ
Sets Channel Plan Block 1 Duplex Offset to 5.0 MHz.
Query Response: CHPlan:CB1:DUPLex:OFFSet?
5.00

4.3.4 Channel Plan - Channel Block 1 or 2 Lower Channel

CHPLan:CB<n>:LOWest:CHannel
CHPLan:CB<n>:LOWest:CHannel?

Description: Set command defines the Lower Channel for indicated Channel Block. Query command returns parameter setting.
CB<n>: where CB<n> indicates Channel Block 1 or 2
<n>: 1 | 2
Range: 0 to 4000
Default Value: 0
Set/Query Format: NR1
Example: CHPLan:CB1:LOWest:CHannel 5
Sets Lower Channel of Channel Block 1 to 5.
Query Response: CHPLan:CB1:LOWest:CHannel?
5

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.3.5 Channel Plan - Block 1 or 2 Lowest Downlink Frequency

CHPlan:CB<n>:LOWest:DOWNlink:FREQuency
CHPlan:CB<n>:LOWest:DOWNlink:FREQuency?

Description: Set command defines the lowest downlink frequency for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Range: 100.0 kHz to 2.71 GHz

Units: GHz | MHz | kHz | Hz

Default Value: 0 MHz

Set/Query Format: NRf | NR1

Example: CHPlan:CB1:LOWest:DOWNlink:FREQuency 390.01MHZ
Sets Lowest Downlink Frequency of Channel Block 1 to 390.01 MHz.

Query Response: CHPlan:CB1:LOWest:DOWNlink:FREQuency?
390.01

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.3.6 Channel Plan - Block 1 or 2 State

CHPLan:CB<n>:INCLuded
CHPLan:CB<n>:INCLuded?

Description: Set command defines whether or not Channel Block information is valid and should be included in the Channel Plan.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Parameter: EXCLUDED | INCLUDED

Default Value: Excluded

Set/Query Format: NR1

Example: CHPLan:CB1:INCLuded INCLUDED
Sets Channel Plan to Include Channel Block 1 parameters.

Query Response: CHPLan:CB1:INCLuded?
INCLUDED

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.3.7 Channel Plan - Block 1 or 2 Upper Channel

CHPlan:CB<n>:HIGHest:CHannel
CHPlan:CB<n>:HIGHest:CHannel?

Description: Set command defines the Highest Channel for indicated Channel Block.
Query command returns parameter setting.
CB<n>: where CB<n> indicates Channel Block 1 or 2
<n>: 1 | 2
Range: 0 to 4000
Default Value: 0
Set/Query Format: NR1
Example: CHPlan:CB1:HIGHest:CHannel 1000
Sets Upper Channel of Channel Block 1 to 1000.
Query Response: CHPlan:CB1:HIGHest:CHannel?
1000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.3.8 Channel Plan - Create a New Channel Plan

CHPLan:NEW

Description: Command begins a blank channel plan.
Parameter: none

NOTE Channel plan name is defined using CHPLan:NEW:NAME command.

4.3.9 Channel Plan - Delete Loaded Channel Plan

CHPLan:DELete

Description: Sending this command deletes the channel plan that is currently loaded.
Parameter: none
Query Response: no query

4.3.10 Channel Plan - Duplex Spacing Value

:CHPLan:DUPLex:SPACing
:CHPLan:DUPLex:SPACing?

Description: Set command defines the Duplex Spacing uplink and downlink frequencies.
Query command returns parameter setting.
Range: 0 to 7
Default Value: based on frequency band
Set/Query Format: NR1
Example: :CHPLan:DUPLex:SPACing 2
Sets Duplex Spacing to 2.
Query Response: :CHPLan:DUPLex:SPACing?
2

NOTE Set command only valid when defining a new Channel Plan.

4.3.11 Channel Plan - Frequency Band Reference

CHPLan:FREQuency:BAND
CHPLan:FREQuency:BAND?

Description: Set command defines the reference frequency for the frequency band being used.
Query command returns parameter setting.

Range: 0 to 9

Default Value: 0

Set/Query Format: NR1

Example: CHPlan:FREQuency:BAND 2
Sets Reference Frequency of the Frequency Band to 2.

Query Response: CHPlan:FREQuency:BAND?
2

4.3.12 Channel Plan - List Available Channel Plans

CHPLan:LIST?

Description: Command returns a list of available channel plan names.

Query Format: ascii string, comma delimited

Query Response: CHPLan:LIST?
380-400 ZERO 25kHz,TETRA 870-921 +12.5 25kHz,TETRA 450-470 +12.5 50kHz,TETRA 450-470 ZERO 25kHz,TETRA 805-870 +12.5 25kHz,TETRA 805-870 ZERO 50kHz,TETRA 410-430 +12.5 25kHz,TETRA 380-400 +12.5 50kHz,TETRA 450-470 +12.5 25kHz,TETRA 805-870 ZERO 25kHz,TETRA 870-921 ZERO 50kHz,TETRA 380-400 +12.5 25kHz,TETRA 380-400 ZERO 50kHz,TETRA 870-921 +12.5 50kHz,TETRA 870-921 ZERO 25kHz,TETRA 450-470 ZERO 50kHz,TETRA 805-870 +12.5 50kHz,TETRA 410-430 +12.5 50kHz,No Plan

4.3.13 Channel Plan - Load Channel Plan

:CHPLan:LOAD “parameter”
:CHPLan:LOAD?

Description: Set command loads the named plan as current Channel Plan.
Query command returns name of Channel Plan currently loaded.

Parameter: file name

Default Value: No Plan

Set/Query Format: ascii string | ascii response data

Example: :CHPLan:LOAD “300Band_plan”
Loads 300Band_plan Channel Plan.

Query Response: :CHPLan:LOAD?
TETRA 380-400 ZERO 25kHz

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

4.3.14 Channel Plan - Offset Value

CHPLan:OFFSet
CHPLan:OFFSet?

Description: Set command defines Channel Plan Offset Value.
Query command returns parameter setting.

Parameter: 0 to 3

where: 0 = No Offset
1 = +6.25 kHz
2 = -6.25 kHz
3 = -12.5 kHz

Default Value: 0

Set/Query Format: NR1

Example: CHPLan:OFFSet 2
Set Channel Plan Offset to -6.25 kHz.

Query Response: CHPLan:OFFSet?
2

4.3.15 Channel Plan - Name/Rename Channel Plan

:CHPLan:NAME “parameter”

Description: Set command renames currently loaded channel plan.

Parameter: file name

Set/Query Format: ascii string | ascii response data

Example: :CHPLan:NAME “300Band_plan_modified”
Renames the current channel plan to 300Band_plan_modified.

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

4.3.16 Channel Plan - Reverse Operation

CHPLan:REVerse:OPERation
CHPLan:REVerse:OPERation?

Description: Set command defines the reverse operation of the uplink frequency in relation to the downlink frequency.
Query command returns parameter setting.

Parameter: NORMAL | REVERSE

Default Value: NORMAL

Set/Query Format: NR1

Example: CHPLan:REVerse:OPERation REVERSE
Sets Reverse Operation to Normal.

Query Response: CHPLan:REVerse:OPERation?
REVERSE

NOTE
Command is only valid when No Plan is selected as the Channel Plan.

4.3.17 Channel Plan - Save Channel Plan

CHPLan:SAVE

Description: Command saves current parameters to currently loaded channel plan

Parameter: none

NOTE Define the channel plan name (CHPLan:NEW:NAME) before defining parameters.

4.4 OFFSETS CONFIGURATION

4.4.1 RF Analyzer - Offset Enable

:CONFigure:OFFSet:ANALyzer:ENABle
:CONFigure:OFFSet:ANALyzer:ENABle?

Description: Set command Enables/Disables the Audio Analyzer Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:ANALyzer:ENABle ON
Enables RF Analyzer Offset.

Query Response: :CONFigure:OFFSet:ANALyzer:ENABle?
1

4.4.2 RF Analyzer - Offset Value

:CONFigure:OFFSet:ANALyzer:VALue
:CONFigure:OFFSet:ANALyzer:VALue?

Description: Set command defines the Audio Analyzer Offset Value.
Query command returns parameter setting.

Range: -40.0 to +40.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:ANALyzer:VALue -10dB
Sets RF Analyzer Offset to -10.0 dB.

Query Response: :CONFigure:OFFSet:ANALyzer:VALue?
-10.00

4.4.3 RF Generator - Offset Enable

:CONFigure:OFFSet:GENerator:ENABle
:CONFigure:OFFSet:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:GENerator:ENABle ON
Enables RF Generator Offset.

Query Response: :CONFigure:OFFSet:GENerator:ENABle?
1

4.4.4 RF Generator - Offset Value

:CONFigure:OFFSet:GENerator:VALue
:CONFigure:OFFSet:GENerator:VALue?

Description: Set command defines RF Generator Offset Value.
Query command returns parameter setting.

Range: -100.0 to +100.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:GENerator:VALue 2.5dB
Set RF Generator Offset to 2.5 dB.

Query Response: :CONFigure:OFFSet:GENerator:VALue?
2.5

4.5 RX MEASUREMENTS LIMITS CONFIGURATION

4.5.1 Bit Error Rate - Averages

:METERs:BER:AVERaging
:METERs:BER:AVERaging?

Description: Set command defines number of readings taken to calculate Average Bit Error Rate measurement.
Query command returns parameter setting.

Range: 1 to 10,000,000

Default Value: 5000

Set/Query Format: NR1

Example: :METERs:BER:AVERaging 100
Sets the number of readings taken to calculate Average Bit Error Rate measurement to 100.

Query Response: :METERs:BER:AVERaging?
100

4.5.2 Bit Error Rate - Lower Limit Enable

:LIMits:BER:LOWer:ENABle
:LIMits:BER:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Bit Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:BER:LOWer:ENABle ON
Enables Lower Limit for Bit Error Rate measurement.

Query Response: :LIMits:BER:LOWer:ENABle?
1

4.5.3 Bit Error Rate - Lower Limit Value

:LIMits:BER:LOWer:VALue
:LIMits:BER:LOWer:VALue?

Description: Set command defines Lower Limit Value for Bit Error Rate measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:BER:LOWer:VALue 1
Sets Lower Limit Value for Bit Error Rate measurement to 1.0%.

Query Response: :LIMits:BER:LOWer:VALue?
1.0000000000

4.5.4 Bit Error Rate - Upper Limit Enable

:LIMits:BER:UPPer:ENABle
:LIMits:BER:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Bit Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:BER:UPPer:ENABle ON
Enables Upper Limit for Bit Error Rate measurement.

Query Response: :LIMits:BER:UPPer:ENABle?
1

4.5.5 Bit Error Rate - Upper Limit Value

:LIMits:BER:UPPer:VALue
:LIMits:BER:UPPer:VALue?

Description: Set command defines Upper Limit Value for Bit Error Rate measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:BER:UPPer:VALue 5
Sets Upper Limit Value for Bit Error Rate measurement to 5%.

Query Response: :LIMits:BER:UPPer:VALue?
5.0000000000

4.5.6 Message Error Rate - Averages

:METERs:MER:AVERaging
:METERs:MER:AVERaging?

Description: Set command defines number of readings taken to calculate Average Message Error Rate measurement.
Query command returns parameter setting.

Range: 1 to 10,000,000

Default Value: 6000

Set/Query Format: NR1

Example: :METERs:MER:AVERaging 100
Sets the number of readings taken to calculate Average Message Error Rate measurement to 100.

Query Response: :METERs:MER:AVERaging?
100

4.5.7 Message Error Rate - Lower Limit Enable

:LIMits:MER:LOWer:ENABle
:LIMits:MER:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Message Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MER:LOWer:ENABle ON
Enables Lower Limit for Message Error Rate measurement.

Query Response: :LIMits:MER:LOWer:ENABle?
1

4.5.8 Message Error Rate - Lower Limit Value

:LIMits:MER:LOWer:VALue
:LIMits:MER:LOWer:VALue?

Description: Set command defines Lower Limit Value for Message Error Rate measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:MER:LOWer:VALue 1
Sets Lower Limit Value for Message Error Rate measurement to 1.0%.

Query Response: :LIMits:MER:LOWer:VALue?
1.0000000000

4.5.9 Message Error Rate - Upper Limit Enable

:LIMits:MER:UPPer:ENABle
:LIMits:MER:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Message Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MER:UPPer:ENABle ON
Enables Upper Limit for Message Error Rate measurement.

Query Response: :LIMits:MER:UPPer:ENABle?
1

4.5.10 Message Error Rate - Upper Limit Value

:LIMits:MER:UPPer:VALue
:LIMits:MER:UPPer:VALue?

Description: Set command defines Upper Limit Value for Message Error Rate measurement. Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:MER:UPPer:VALue 1
Sets Upper Limit Value for Message Error Rate measurement to 1.0%.

Query Response: :LIMits:MER:UPPer:VALue?
1.0000000000

4.6 SYSTEM ID & SYNC CONFIGURATION

4.6.1 System ID & Sync Parameters - Base Station Color Code

:TRANsmit:BCC
:TRANsmit:BCC?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.

Range: 0 to 63

Default Value: 1

Set/Query Format: NR1

Example: :TRANsmit:BCC 50
Sets Transmit Color Code to 50.

Query Response: :TRANsmit:BCC?
50

4.6.2 Transmit - Signal Type

:TRANsmit:TYPE
:TRANsmit:TYPE?

Description: Set command defines the type of burst being transmitted by the Test Set.
Query command returns parameter setting.

Parameter:

0 = NO RECEPTION	13 = Q/U 64-QAM (r=2/3)
1 = Q/ HU 4-QAM (r=1)	14 = Q/U 64-QAM (r=1/2)
2 = Q/HU 4-QAM (r=1/2)	15 = RESERVED
3 = Q/HU 16-QAM (r=1)	16 = Q/D 4-QAM (r=1)
4 = Q/HU 16-QAM (r=1/2)	17 = Q/D 4-QAM (r=1/2)
5 = Q/HU 64-QAM (r=1)	18 = Q/D 16-QAM (r=1)
6 = Q/HU 64-QAM (r=2/3)	19 = Q/D 16-QAM (r=1/2)
7 = Q/HU 64-QAM (r=1/2)	20 = Q/D 64-QAM (r=1)
8 = Q/U 4-QAM (r=1)	21 = Q/D 64-QAM (r=2/3)
9 = Q/U 4-QAM (r=1/2)	22 = Q/D 64-QAM (r=1/2)
10 = Q/U 16-QAM (r=1)	23 = RESERVED
11 = Q/U 16-QAM (r=1/2)	24 = DETECTED
12 = Q/U 64-QAM (r=1)	

Default Value: 2 (Q/HU 4-QAM (r=1/2))

Set/Query Format: NR1

Example: :TRANsmit:TYPE 6
Sets Test Set to transmit a Q/HU 64-QAM (r=2/3) modulated signal.

Query Response: :TRANsmit:TYPE?
6

4.6.3 System ID & Sync Parameters - Base Station Mobile Country Code

:TRANsmit:MCC
:TRANsmit:MCC?

Description: Set command defines Transmit Mobile Country Code.
Query command returns parameter setting.
Range: 0 to 1023
Default Value: 1
Set/Query Format: NR1
Example: :TRANsmit:MCC
Sets Transmit Mobile Country Code to 234 (United Kingdom).
Query Response: :TRANsmit:MCC?
234

4.6.4 System ID & Sync Parameters - Base Station Mobile Network Code

:TRANsmit:MNC
:TRANsmit:MNC?

Description: Set command defines Transmit Mobile Country Code.
Query command returns parameter setting.
Range: 0 to 16383
Default Value: 1
Set/Query Format: NR1
Example: :TRANsmit:MNC
Sets Transmit Mobile Network Code to 1234.
Query Response: :TRANsmit:MNC?
1234

4.6.5 System ID & Sync Parameters - Base Station Sync Mode

:TRANsmit:BS:SYNC:MODE
:TRANsmit:BS:SYNC:MODE?

Description: Set command defines the type of burst being transmitted by the Test Set.
Query command returns parameter setting.
Parameter: RF | PULSE
Default Value: RF
Set/Query Format: CPD | CRD
Example: :TRANsmit:BS:SYNC:MODE PULSE
Sets BS Sync Mode to Pulse.
Query Response: :TRANsmit:BS:SYNC:MODE?
PULSE

4.6.6 System ID & Sync Parameters - Base Station Sync Pulse Edge

:TRANsmit:BS:SYNC:PULSE:EDGE
:TRANsmit:BS:SYNC:PULSE:EDGE?

Description: Set command defines the type of burst being transmitted by the Test Set.
Query command returns parameter setting.

Parameter: RISING | FALLING

Default Value: Rising

Set/Query Format: CPD | CRD

Example: :TRANsmit:BS:SYNC:PULSE:EDGE FALLING
Sets BS Pulse Sync Edge to Falling.

Query Response: :TRANsmit:BS:SYNC:PULSE:EDGE?
FALLING

NOTE :TRANsmit:BS:SYNC:MODE must be set to PULSE for command to be valid.

4.6.7 System ID & Sync Parameters - Base Station Sync Pulse Offset Value

:TRANsmit:BS:SYNC:PULSE:OFFSet
:TRANsmit:BS:SYNC:PULSE:OFFSet?

Description: Set command defines the Sync Pulse offset value.
Query command returns parameter setting.

Range: 0 to 1.02

Units: seconds

Default Value: 0.0 seconds

Set/Query Format: NR2

Example: :TRANsmit:BS:SYNC:PULSE:OFFSet 1.0
Sets Sync Pulse offset to 1.0 seconds.

Query Response: :TRANsmit:BS:SYNC:PULSE:OFFSet?
1.000000

NOTE :TRANsmit:BS:SYNC:MODE must be set to PULSE for command to be valid.

4.7 TX MEASUREMENTS LIMITS CONFIGURATION

4.7.1 IQ Imbalance - Lower Limit Enable

:LIMits:IQI:LOWer:ENABle
:LIMits:IQI:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for IQ Imbalance measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:IQI:LOWer:ENABle ON
Enables Lower Limit for IQ Imbalance measurement.

Query Response: :LIMits:IQI:LOWer:ENABle?
1

4.7.2 IQ Imbalance - Lower Limit Value

:LIMits:IQI:LOWer:VALue
:LIMits:IQI:LOWer:VALue?

Description: Set command defines Lower Limit Value for IQ Imbalance measurement.
Query command returns parameter setting.

Range: 0.0 to 2.0

Default Value: 0.0

Set/Query Format: NR1

Example: :LIMits:IQI:LOWer:VALue 1
Sets Lower Limit Value for IQ Imbalance measurement to 1.

Query Response: :LIMits:IQI:LOWer:VALue?
1.0000000000

4.7.3 IQ Imbalance - Upper Limit Enable

:LIMits:IQI:UPPer:ENABle
:LIMits:IQI:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for IQ Imbalance measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:IQI:UPPer:ENABle ON
Enables Upper Limit for IQ Imbalance measurement.

Query Response: :LIMits:IQI:UPPer:ENABle?
1

4.7.4 IQ Imbalance - Upper Limit Value

:LIMits:IQI:UPPer:VALue
:LIMits:IQI:UPPer:VALue?

Description: Set command defines Upper Limit Value for IQ Imbalance measurement.
Query command returns parameter setting.

Range: 0.0 to 2.0

Default Value: 0.0

Set/Query Format: NR1

Example: :LIMits:IQI:UPPer:VALue 1.5
Sets Upper Limit Value for IQ Imbalance measurement to 1.5.

Query Response: :LIMits:IQI:UPPer:VALue?
1.5000000000

4.7.5 Mean Frequency Error - Lower Limit Enable

:LIMits:MFERRor:LOWer:ENABle
:LIMits:MFERRor:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Mean Frequency Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MFERRor:LOWer:ENABle ON
Enables Lower Limit for Mean Frequency Error measurement.

Query Response: :LIMits:MFERRor:LOWer:ENABle?
1

4.7.6 Mean Frequency Error - Lower Limit Value

:LIMits:MFERRor:LOWer:VALue
:LIMits:MFERRor:LOWer:VALue?

Description: Set command defines Lower Limit Value for Mean Frequency Error measurement.
Query command returns parameter setting.

Range: -2000 to 2000 Hz
-1000 to 1000 ppm

Units: Hz | ppm

Default Value: 0 Hz

Set/Query Format: NRf | NR2

Example: :LIMits:MFERRor:LOWer:VALue 2.0
Sets Lower Limit Value for Mean Frequency Error measurement to 100 Hz.

Query Response: :LIMits:MFERRor:LOWer:VALue?
100

NOTE Units is defined using :METERs:MFERRor:UNIts remote command.

4.7.7 Mean Frequency Error - Upper Limit Enable

:LIMits:MFERRor:UPPer:ENABle
:LIMits:MFERRor:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Mean Frequency Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MFERRor:UPPer:ENABle ON
Enables Upper Limit for Mean Frequency Error measurement.

Query Response: :LIMits:MFERRor:UPPer:ENABle?
1

4.7.8 Mean Frequency Error - Upper Limit Value

:LIMits:MFERRor:UPPer:VALue
:LIMits:MFERRor:UPPer:VALue?

Description: Set command defines Upper Limit Value for Mean Frequency Error measurement.
Query command returns parameter setting.

Range: -2000 to 2000 Hz
-1000 to 1000 ppm

Units: Hz | ppm

Default Value: 0 Hz

Set/Query Format: NRf | NR2

Example: :LIMits:MFERRor:UPPer:VALue 100
Sets Upper Limit Value for Mean Frequency Error measurement to 100 Hz.

Query Response: :LIMits:MFERRor:UPPer:VALue?
100

NOTE Units is defined using :METERs:MFERRor:UNIts remote command.

4.7.9 Peak Vector Error - Lower Limit Enable

:LIMits:VPEak:LOWer:ENABle
:LIMits:VPEak:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Peak Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VPEak:LOWer:ENABle ON
Enables Lower Limit for Peak Vector Error measurement.

Query Response: :LIMits:VPEak:LOWer:ENABle?
1

4.7.10 Peak Vector Error - Lower Limit Value

:LIMits:VPEak:LOWer:VALue
:LIMits:VPEak:LOWer:VALue?

Description: Set command defines Lower Limit Value for Peak Vector Error measurement.
Query command returns parameter setting.

Range: 0.0 to 200.0%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :LIMits:VPEak:LOWer:VALue 10
Sets Lower Limit Value for Peak Vector Error measurement to 10%.

Query Response: :LIMits:VPEak:LOWer:VALue?
10.0000000000

4.7.11 Peak Vector Error - Upper Limit Enable

:LIMits:VPEak:UPPer:ENABle
:LIMits:VPEak:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Peak Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VPEak:UPPer:ENABle ON
Enables Upper Limit for Peak Vector Error measurement.

Query Response: :LIMits:VPEak:UPPer:ENABle?
1

4.7.12 Peak Vector Error - Upper Limit Value

:LIMits:VPEak:UPPer:VALue
:LIMits:VPEak:UPPer:VALue?

Description: Set command defines Upper Limit Value for Peak Vector Error measurement.
Query command returns parameter setting.

Range: 0.0 to 200.0%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :LIMits:VPEak:UPPer:VALue 20
Sets Upper Limit Value for Peak Vector Error measurement to 20%.

Query Response: :LIMits:VPEak:UPPer:VALue?
20.0000000000

4.7.13 RMS Vector Error - Lower Limit Enable

:LIMits:VRMS:LOWer:ENABle
:LIMits:VRMS:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for RMS Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VRMS:LOWer:ENABle ON
Enables Lower Limit for RMS Vector Error measurement.

Query Response: :LIMits:VRMS:LOWer:ENABle?
1

4.7.14 RMS Vector Error - Lower Limit Value

:LIMits:VRMS:LOWer:VALue
:LIMits:VRMS:LOWer:VALue?

Description: Set command defines Lower Limit Value for RMS Vector Error measurement.
Query command returns parameter setting.

Range: 0.0 to 200.0%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :LIMits:VRMS:LOWer:VALue 10
Sets Lower Limit Value for RMS Vector Error measurement to 10%.

Query Response: :LIMits:VRMS:LOWer:VALue?
10.0000000000

4.7.15 RMS Vector Error - Upper Limit Enable

:LIMits:VRMS:UPPer:ENABle
:LIMits:VRMS:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for RMS Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VRMS:UPPer:ENABle ON
Enables Upper Limit for RMS Vector Error measurement.

Query Response: :LIMits:VRMS:UPPer:ENABle?
1

4.7.16 RMS Vector Error - Upper Limit Value

:LIMits:VRMS:UPPer:VALue
:LIMits:VRMS:UPPer:VALue?

Description: Set command defines Upper Limit Value for RMS Vector Error measurement. Query command returns parameter setting.
Range: 0.0 to 200.0%
Units: %
Default Value: 0%
Set/Query Format: NRf | NR2
Example: :LIMits:VRMS:UPPer:VALue 20
Sets Upper Limit Value for RMS Vector Error measurement to 20%.
Query Response: :LIMits:VRMS:UPPer:VALue?
20.0000000000

4.7.17 Signal Power - Lower Limit Enable

:LIMits:POWer:LOWer:ENABle
:LIMits:POWer:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Signal Power measurement. Query command returns parameter setting.
Parameter: OFF | ON | 0 | 1
Default Value: OFF
Set/Query Format: Boolean
Example: :LIMits:POWer:LOWer:ENABle ON
Enables Lower Limit for Signal Power measurement.
Query Response: :LIMits:POWer:LOWer:ENABle?
1

4.7.18 Signal Power - Lower Limit Value

:LIMits:POWer:LOWer:VALue
:LIMits:POWer:LOWer:VALue?

Description: Set command defines Lower Limit Value for Signal Power measurement. Query command returns parameter setting.
Range: -140.0 to 70.0 dBm
Units: dBm
Default Value: 0.0 dBm
Set/Query Format: NRf | NR2
Example: :LIMits:POWer:LOWer:VALue -45
Sets Lower Limit Value for Signal Power measurement to -45.0 dBm
Query Response: :LIMits:POWer:LOWer:VALue?
-45.00

4.7.19 Signal Power - Upper Limit Enable

:LIMits:POWer:UPPer:ENABle
:LIMits:POWer:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Signal Power measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:POWer:UPPer:ENABle ON
Enables Upper Limit for Signal Power measurement.

Query Response: :LIMits:POWer:UPPer:ENABle?
1

4.7.20 Signal Power - Upper Limit Value

:LIMits:POWer:UPPer:VALue
:LIMits:POWer:UPPer:VALue?

Description: Set command defines Upper Limit Value for Signal Power measurement.
Query command returns parameter setting.

Range: -140.0 to 70.0 dBm

Units: dBm

Default Value: 0.0 dBm

Set/Query Format: NRf | NR2

Example: :LIMits:POWer:UPPer:VALue -45
Sets Upper Limit Value for Signal Power measurement to -45.0 dBm

Query Response: :LIMits:POWer:UPPer:VALue?
-45.00

4.8 CONTROL

4.8.1 Base Station - Received Burst Type

:BS:RECeive:BURSt?

Description: Query command returns type of T1 T4 Burst type received from Base Station.

Query Data: ascii

Query Response: :BS:RECeive:BURSt?
SCH-Q/HU

4.8.2 Base Station - Error Correction

:BS:RECeive:ERRor:CORRection?

Description: Query command returns error correction setting decoded from the signal received from the Base Station.

Query Data: text

Query Response: :BS:RECeive:ERRor:CORRection?
ON

4.8.3 Base Station - Loopback Mode

:BS:RECeive:LOOPback?

Description: Query command returns loopback setting decoded from the signal received from the Base Station.

Query Data: text

Query Response: :BS:RECeive:LOOPback?
ON

4.8.4 Duplex Spacing - Mode of Operation

:DUPLex:LOCK
:DUPLex:LOCK?

Description: Enables/disables Duplex Spacing.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :DUPLex:LOCK ON
Sets Duplex Mode of Operation to ON.

Query Response: :DUPLex:LOCK?
1

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.8.5 Duplex Spacing - Offset Value

:DUPLex:SPACing
:DUPLex:SPACing?

Description: Set command defines the RF Duplex Spacing.
Query command returns parameter setting.

Range: -999.0 to +999.0 MHz

Units: Hz | kHz | MHz | GHz

Default Value: 10.0 MHz

Set/Query Format: NRf | NR2 (Hz)

Example: :DUPLex:SPACing 15MHz
Sets Duplex Spacing to 15.0 MHz.

Query Response: :DUPLex:SPACing?
15000000.0

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.8.6 Modulation Generator - Enable

:TRANsmit:MODulation
:TRANsmit:MODulation?

Description: Set command Enables/Disables Generator Modulation.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :TRANsmit:MODulation OFF
Turns Modulation Generator off.

Query Response: :TRANsmit:MODulation?
0

4.8.7 Receiver - Automatic Gain Control

:RECeive:AGC
:RECeive:AGC?

Description: Set command Enables/Disables Receiver Automatic Gain Control.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RECeive:AGC OFF
Turns Automatic Gain Control off.

Query Response: :RECeive:AGC?
0

4.8.8 Receiver - Autosync Mode

:RECeived:AUTOsync
:RECeived:AUTOsync?

Description: Set command Enables/Disables Autosync mode.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RECeived:AUTOsync OFF
Turns Autosync OFF.

Query Response: :RECeived:AUTOsync?
0

4.8.9 Receiver - Bandwidth

:RECeive:BANDwidth
:RECeive:BANDwidth?

Description: Set command defines the Receiver Bandwidth.
Query command returns parameter setting.

Parameter: KHZ25 | KHZ50

Default Value: KHZ25 (25 kHz)

Set/Query Format: CPD | CRD

Example: :RECeive:BANDwidth KHZ25
Sets Receiver Bandwidth to 25.0 kHz.

Query Response: :RECeive:BANDwidth?
KHZ25

4.8.10 Receiver - Base Station Burst Type

:RECeive:TYPE
:RECeive:TYPE?

Description: Set command defines the type of burst being sent to the Test Set by the base station.
Query command returns parameter setting.

Parameter: 0 = No Receive Signal
16 = Q/D 4-QAM (r=1)
17 = Q/D 4-QAM (r=1/2)
18 = Q/D 16-QAM (r=1)
19 = Q/D 16-QAM (r=1/2)
20 = Q/D 64-QAM (r=1)
21 = Q/D 64-QAM (r=2/3)
22 = Q/D 64-QAM (r=1/2)

Default Value: 0 (No Receive Signal)

Set/Query Format: NR1

Example: :RECeive:TYPE 16
Sets Test Set to receive a Q/D 4-QAM (r=1) modulated signal.

Query Response: :RECeive:TYPE?
6

4.8.11 Receiver - Expected Power Level

RECeive:EXPECTed:POWer
RECeive:EXPECTed:POWer?

Description: Set command defines Expected Power Level.
Query command returns parameter setting.

T/R Parameter: 0 to 10

ANT Parameter: 11 to 27

where:

0 = 55.0 dBm / 300 W	14 = -15.0 dBm / 30 µW
1 = 50.0 dBm / 100 W	15 = -20.0 dBm / 10 µW
2 = 45.0 dBm / 30 W	16 = -25.0 dBm / 3 µW
3 = 40.0 dBm / 10 W	17 = -30.0 dBm / 1 µW
4 = 35.0 dBm / 3 W	18 = -35.0 dBm
5 = 30.0 dBm / 1 W	19 = -40.0 dBm
6 = 25.0 dBm / 300 mW	20 = -45.0 dBm
7 = 20.0 dBm / 100 mW	21 = -50.0 dBm
8 = 15.0 dBm / 30 mW	22 = -55.0 dBm
9 = 10.0 dBm / 10 mW	23 = -60.0 dBm
10 = 5.0 dBm / 3 mW	24 = -65.0 dBm
11 = 0.0 dBm / 1 mW	25 = -70.0 dBm
12 = -5.0 dBm / 300 µW	26 = -75.0 dBm
13 = -10.0 dBm / 100 µW	27 = -80.0 dBm

Default Value: 0 (55.0 dBm / 300 W)

Set/Query Format: NRf | NR2

Example: RECeive:EXPECTed:POWer 12
Sets Expected Power Level to -5.0 dBm / 300 µW.

Query Response: RECeive:EXPECTed:POWer?
12

4.8.12 Receiver - Frequency

:RF:ANALyzer:FREQuency
:RF:ANALyzer:FREQuency?

Description: Set command defines the RF Analyzer Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units : Hz | kHz | MHz | GHz

Default Value: 390.0 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:ANALyzer:FREQuency 400MHz
Sets RF Analyzer Frequency to 400.0 MHz.

Query Response: :RF:ANALyzer:FREQuency?
400.0

NOTE Command is only valid when No Plan is selected as the Channel Plan.

4.8.13 Receiver - Input Connector

:RF:ANALyzer:PORT
:RF:ANALyzer:PORT?

Description: Set command selects the RF Input Connector.
Query command returns parameter setting.

Parameter: TR | ANT

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:PORT ANT
Selects Antenna Connector as RF Input Connector.

Query Response: :RF:ANALyzer:PORT?
ANT

NOTE Refer to 3900 Platform Specifications for maximum input values.

4.8.14 Receiver - Pre-Amplifier Enable

:RF:ANALyzer:RECeiver:AMP
:RF:ANALyzer:RECeiver:AMP?

Description: Set command Enables/Disables Receiver Pre-Amplifier.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :RF:ANALyzer:RrECeiver:AMP ON
Enables Receiver Pre-Amplifier.

Query Response: :RF:ANALyzer:RECeiver:AMP?
1

4.8.15 Receiver - RF Channel

:RECeive:CHannel
:RECeive:CHannel?

Description: Set command defines Receiver Channel.
Query command returns parameter setting.

Range: 3600 to 3900

Default Value: 3600

Set/Query Format: NR1

Example: :RECeive:CHannel 3700
Sets RF Channel to 3700.

Query Response: :RECeive:CHannel?
3700

4.8.16 RF Generator - Enable

:RF:GENerator:ENABle
:RF:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:ENABle ON
Enables RF Generator.

Query Response: :RF:GENerator:ENABle?
1

4.8.17 RF Generator - Frequency

:RF:GENerator:FREQuency
:RF:GENerator:FREQuency?

Description: Set command defines RF Generator Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units: Hz | kHz | MHz | GHz

Default Value: 390.00 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:GENerator:FREQuency 400MHz
Sets RF Generator Frequency to 400.0 MHz.

Query Response: :RF:GENerator:FREQuency?
400.0

4.8.18 RF Generator - Level

:RF:GENerator:LEVel
:RF:GENerator:LEVel?

Description: Set command defines RF Generator Level.
Query command returns parameter setting.

Range: **TR:** -130.0 to -40.0 dBm
GEN: -130.0 to 0.0 dBm

Units: dBm

Default Value: -40.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:GENerator:LEVel -40dBm
Sets RF Generator Level to -40.0 dBm.

Query Response: :RF:GENerator:LEVel?
-40.00

4.8.19 RF Generator - Output Connector

:RF:GENerator:PORT
:RF:GENerator:PORT?

Description: Set command selects the RF Out connector.
Query command returns parameter setting.

Parameter: TR | GEN

Default Value: GEN

Set/Query Format: CPD | CRD

Example: :RF:GENerator:PORT GEN
Selects Generator Connector as RF Output Connector.

Query Response: :RF:GENerator:PORT?
GEN

4.8.20 Transmit - Mobile Power Type

MS:POWer:TYPE
MS:POWer:TYPE?

Description: Set command defines Transmit (Mobile) Power Type.
Query command returns parameter setting.

Parameter: OPENLOOP | EXPECTED

Default Value: OPENLOOP

Set/Query Format: CPD | CRD

Example: MS:POWer:TYPE EXPECTED
Defines Mobile Power Type as Expected.

Query Response: MS:POWer:TYPE?
EXPECTED

4.8.21 Transmit - Mobile Power Level

MS:POWer
MS:POWer?

Description: Set command defines Transmit (Mobile) Power Level.
Query command returns parameter setting.

T/R Parameter: 0 to 10

ANT Parameter: 11 to 27

where:

1 = 55.0 dBm / 300 W	11 = 5.0 dBm / 3 mW
2 = 50.0 dBm / 100 W	12 = 0.0 dBm / 1 mW
3 = 45.0 dBm / 30 W	13 = -5.0 dBm / 300 µW
4 = 40.0 dBm / 10 W	14 = -10.0 dBm / 100 µW
5 = 35.0 dBm / 3 W	15 = -15.0 dBm / 30 µW
6 = 30.0 dBm / 1 W	16 = -20.0 dBm / 10 µW
7 = 25.0 dBm / 300 mW	17 = -25.0 dBm / 3 µW
8 = 20.0 dBm / 100 mW	18 = -30.0 dBm / 1 µW
9 = 15.0 dBm / 30 mW	19 = -35.0 dBm
10 = 10.0 dBm / 10 mW	20 = -40.0 dBm

Default Value: 1 (55.0 dBm / 300 W

Set/Query Format: NRf | NR2

Example: MS:POWer 12
Sets Transmit (Mobile) Power Level to 0.0 dBm / 1 mW.

Query Response: MS:POWer?
12

4.8.22 Transmit - Offset Value

:TRANsmit:OFFSet
:TRANsmit:OFFSet?

Description: Set command defines Transmit Offset Value.
Query command returns parameter setting.

Parameter: 0 to 3

where: 0 = No Offset
1 = +6.25 kHz
2 = -6.25 kHz
3 = -12.5 kHz

Default Value: 0 (No Offset)

Set/Query Format: NR1

Example: :TRANsmit:OFFSet 2
Set Transmit Offset to -6.25 kHz.

Query Response: :TRANsmit:OFFSet?
2

4.8.23 Transmit - Signal Type

:TRANsmit:TYPE
:TRANsmit:TYPE?

Description: Set command defines the type of burst being transmitted by the Test Set. Query command returns parameter setting.

Parameter:

0 = NO RECEPTION	13 = Q/U 64-QAM (r=2/3)
1 = Q/ HU 4-QAM (r=1)	14 = Q/U 64-QAM (r=1/2)
2 = Q/HU 4-QAM (r=1/2)	15 = RESERVED
3 = Q/HU 16-QAM (r=1)	16 = Q/D 4-QAM (r=1)
4 = Q/HU 16-QAM (r=1/2)	17 = Q/D 4-QAM (r=1/2)
5 = Q/HU 64-QAM (r=1)	18 = Q/D 16-QAM (r=1)
6 = Q/HU 64-QAM (r=2/3)	19 = Q/D 16-QAM (r=1/2)
7 = Q/HU 64-QAM (r=1/2)	20 = Q/D 64-QAM (r=1)
8 = Q/U 4-QAM (r=1)	21 = Q/D 64-QAM (r=2/3)
9 = Q/U 4-QAM (r=1/2)	22 = Q/D 64-QAM (r=1/2)
10 = Q/U 16-QAM (r=1)	23 = RESERVED
11 = Q/U 16-QAM (r=1/2)	24 = DETECTED
12 = Q/U 64-QAM (r=1)	

Default Value: 2 (Q/HU 4-QAM (r=1/2))

Set/Query Format: NR1

Example: :TRANsmit:TYPE 6
Sets Test Set to transmit a Q/HU 64-QAM (r=2/3) modulated signal.

Query Response: :TRANsmit:TYPE?
6

4.9 OPERATIONS/STATUS

4.9.1 Operation/Status - Base Station Color Code

:RECeived:BCC?

Description: Returns CCC received from UUT.

Query Format: NR1

Query Response: :RECeived:BCC?
25

4.9.2 Operation/Status - Base Station Mobile Country Code

:RECeived:MCC?

Description: Returns MCC received from UUT.

Query Format: NR1

Query Response: :RECeived:MCC?
55

4.9.3 Operation/Status - Base Station Mobile Network Code

:RECeived:MNC?

Description: Returns MNC received from UUT.

Query Format: NR1

Query Response: :RECeived:MNC?
1234

4.9.4 Operation/Status - SICH-Q

:RECeived:SICHQ?<x>

Description: Returns SICHQ received from UUT.

Query Data: SICH-Q bits

<x>: specifies query format

Query Format: binary: query command ends with b
octal: query command ends with q
decimal: default format
hex: query command ends with h

Bit Data: Uplink/Downlink

00000	4-QAM rate = 1/2
00001	16-QAM rate = 1/2
00010	16-QAM rate = 1
00011	64-QAM rate = 1/2
00100	64-QAM rate = 2/3
00101	64-QAM rate = 1
00110 to 11111	Reserved

Query Response: :RECeived:SICHQ?b
10

NOTE

-1 indicates invalid data.
Leading values are dropped from binary return data (i.e., 00001 is returned as 1).
Uplink and downlink bit values are defined per ETSI EN 300392-2 V3.4.1.

4.10 RX MEASUREMENTS

4.10.1 Meters (All) - Averages

:METERs:ALL:AVERaging
:METERs:ALL:AVERaging?

Description: Set command defines the number of readings taken to calculate all Average measurements.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NRf | NR1

Example: :METERs:ALL:AVERaging 75
Sets number of readings taken to calculate Average measurements to 75.

Query Response: :METERs:ALL:AVERaging?
75

4.10.2 Rx Measurements - Measurement Mode

:METERs:RX:MEASurement:MODE
:METERs:RX:MEASurement:MODE?

Description: Set command defines single or repeat measurements for BER and MER Rx Measurements.
Query command returns parameter setting.

Parameter: SINGLE | REPEAT

Default Value: SINGLE

Set/Query Format: CPD | CRD

Example: :METERs:RX:MEASurement:MODE REPEAT
Enables Repeat BER and MER measurements.

Query Response: :METERs:RX:MEASurement:MODE?
REPEAT

4.10.3 Bit Error Rate - Averages

:METERs:BER:AVERaging
:METERs:BER:AVERaging?

Description: Set command defines number of readings taken to calculate Average Bit Error Rate measurement.
Query command returns parameter setting.

Range: 1 to 10,000,000

Default Value: 5000

Set/Query Format: NR1

Example: :METERs:BER:AVERaging 100
Sets the number of readings taken to calculate Average Bit Error Rate measurement to 100.

Query Response: :METERs:BER:AVERaging?
100

4.10.4 Bit Error Rate - Average Measurement Reset

:METERs:BER:CLEAR:AVG

Description: Command clears and resets Average Bit Error Rate measurement.

Parameter/Query: none

4.10.5 Bit Error Rate - Measurement Query

:METERs:BER:STATus?

Description: Command returns Bit Error Rate measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<errored>,<total>,<samples>,<time stamp>,<unit>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

average: Indicates the average BER measurement

errored: Indicates the number of bits received in error

total: Indicates the total number of bits received

samples: Indicates the number of samples acquired to perform measurement

time stamp: Indicates time of measurement in HH:MM:SS format

units (NR1): Refer to Appendix A.

Query Response: :METERs:BER:STATus?
0, 0, 3, 109.571, 0.000, 0.000, 5232.000, 4775, 00:00:00, 1

4.10.6 Bit Error Rate - Peak Measurement Reset

:METERs:BER:CLEAR:PEAK

Description: Command clears and resets Peak Bit Error Rate measurement.

Parameter/Query: none

4.10.7 Message Error Rate - Averages

:METERs:MER:AVERaging
:METERs:MER:AVERaging?

Description: Set command defines number of readings taken to calculate Average Message Error Rate measurement.
Query command returns parameter setting.

Range: 1 to 10,000,000

Default Value: 6000

Set/Query Format: NR1

Example: :METERs:MER:AVERaging 100
Sets the number of readings taken to calculate Average Message Error Rate measurement to 100.

Query Response: :METERs:MER:AVERaging?
100

4.10.8 Magnitude Error Rate - Average Measurement Reset

:METERs:MER:CLEAR:AVG

Description: Command clears and resets Average Magnitude Error Rate measurement.

Parameter/Query: none

4.10.9 Magniture Error Rate - Measurement Query

:METERs:MER:STATus?

Description: Command returns Magnitude Error Rate measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

average: Indicates the average BER measurement

errored: Indicates the number of bits received in error

total: Indicates the total number of bits received

samples: Indicates the number of samples acquired to perform measurement

time stamp: Indicates time of measurement in HH:MM:SS format

units (NR1): Refer to Appendix A.

Query Response: :METERs:MER:STATus?
0, 16, 3, 100.000, 28.525, 1141.000, 4000.000, 4000, 00:03:46, 1

4.10.10 Magnitude Error Rate - Peak Measurement Reset

:METERs:MER:CLEAR:PEAK

Description: Command clears and resets Peak Magnitude Error Rate measurement.

Parameter/Query: none

4.11 SYSTEM ID & SYNC

4.11.1 System ID & Sync Parameters - Base Station Color Code

:TRANsmit:BCC
:TRANsmit:BCC?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.

Range: 0 to 63

Default Value: 1

Set/Query Format: NR1

Example: :TRANsmit:BCC 50
Sets Transmit Color Code to 50.

Query Response: :TRANsmit:BCC?
50

4.11.2 System ID & Sync Parameters - Base Station ID Mode

:TRANsmit:BSID:MODE
:TRANsmit:BSID:MODE?

Description: Set command defines the
Query command returns parameter setting.

Parameter: MANUAL | AUTOMATIC

Default Value: MANUAL

Set/Query Format: NR1

Example: :TRANsmit:BSID:MODE AUTOMATIC
Sets ???

Query Response: :TRANsmit:BSID:MODE?
AUTOMATIC

4.11.3 System ID & Sync Parameters - Base Station Mobile Country Code

:TRANsmit:MCC
:TRANsmit:MCC?

Description: Set command defines Transmit Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 1023

Default Value: 1

Set/Query Format: NR1

Example: :TRANsmit:MCC
Sets Transmit Mobile Country Code to 234 (United Kingdom).

Query Response: :TRANsmit:MCC?
234

4.11.4 System ID & Sync Parameters - Base Station Mobile Network Code

:TRANsmit:MNC
:TRANsmit:MNC?

Description: Set command defines Transmit Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 16383

Default Value: 1

Set/Query Format: NR1

Example: :TRANsmit:MNC
Sets Transmit Mobile Network Code to 1234.

Query Response: :TRANsmit:MNC?
1234

4.11.5 System ID & Sync Parameters - Base Station Sync Mode

:TRANsmit:BS:SYNC:MODE
:TRANsmit:BS:SYNC:MODE?

Description: Set command defines the type of burst being transmitted by the Test Set.
Query command returns parameter setting.

Parameter: RF | PULSE

Default Value: RF

Set/Query Format: CPD | CRD

Example: :TRANsmit:BS:SYNC:MODE PULSE
Sets BS Sync Mode to Pulse.

Query Response: :TRANsmit:BS:SYNC:MODE?
PULSE

4.11.6 System ID & Sync Parameters - Base Station Sync Pulse Edge

:TRANsmit:BS:SYNC:PULSE:EDGE
:TRANsmit:BS:SYNC:PULSE:EDGE?

Description: Set command defines the type of burst being transmitted by the Test Set.
Query command returns parameter setting.

Parameter: RISING | FALLING

Default Value: Rising

Set/Query Format: CPD | CRD

Example: :TRANsmit:BS:SYNC:PULSE:EDGE FALLING
Sets BS Pulse Sync Edge to Falling.

Query Response: :TRANsmit:BS:SYNC:PULSE:EDGE?
FALLING

NOTE :TRANsmit:BS:SYNC:MODE must be set to PULSE for command to be valid.

4.11.7 System ID & Sync Parameters - Base Station Sync Pulse Offset Value

:TRANsmit:BS:SYNC:PULSE:OFFSet
:TRANsmit:BS:SYNC:PULSE:OFFSet?

Description: Set command defines the Sync Pulse offset value.
Query command returns parameter setting.

Range: 0 to 1.02

Units: seconds

Default Value: 0.0 seconds

Set/Query Format: NR2

Example: :TRANsmit:BS:SYNC:PULSE:OFFSet 1.0
Sets Sync Pulse offset to 1.0 seconds.

Query Response: :TRANsmit:BS:SYNC:PULSE:OFFSet?
1.000000

NOTE :TRANsmit:BS:SYNC:MODE must be set to PULSE for command to be valid.

4.12 TX MEASUREMENTS

4.12.1 Meters (All) - Averages

:METERs:ALL:AVERaging
:METERs:ALL:AVERaging?

Description: Set command defines the number of readings taken to calculate all Average measurements.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NRf | NR1

Example: :METERs:ALL:AVERaging 75
Sets number of readings taken to calculate Average measurements to 75.

Query Response: :METERs:ALL:AVERaging?
75

4.12.2 IQ Imbalance - Averages

:METERs:IQI:AVERaging
:METERs:IQI:AVERaging?

Description: Set command defines number of readings taken to calculate Average IQ Imbalance measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:IQI:AVERaging 100
Sets the number of readings taken to calculate Average IQ Imbalance measurement to 100.

Query Response: :METERs:IQI:AVERaging?
100

4.12.3 IQ Imbalance - Average Measurement Reset

:METERs:IQI:CLEAR:AVG

Description: Command clears and resets Average IQ Imbalance measurement.

Parameter/Query: none

4.12.4 IQ Imbalance - Measurement Query

:METERs:IQI:STATus?

Description: Command returns IQ Imbalance measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:IQI:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

4.12.5 IQ Imbalance - Peak Measurement Reset

:METERs:IQI:CLEAR:PEAK

Description: Command clears and resets Peak IQ Imbalance measurement.

Parameter/Query: none

4.12.6 Mean Frequency Error - Averages

:METERs:MFERRor:AVERaging
:METERs:MFERRor:AVERaging?

Description: Set command defines number of readings taken to calculate Average Mean Frequency Error measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:MFERRor:AVERaging 100
Sets the number of readings taken to calculate Average Mean Frequency Error measurement to 100.

Query Response: :METERs:MFERRor:AVERaging?
100

4.12.7 Mean Frequency Error - Average Measurement Reset

:METERs:MFERRor:CLEAR:AVG

Description: Command clears and resets Average Mean Frequency Error measurement.

Parameter/Query: none

4.12.8 Mean Frequency Error - Measurement Query

:METERs:MFERRor:STATus?

Description: Command returns Mean Frequency Error measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<wc max>,<wc min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (3): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings. Always 3.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

wc max, wc min (NR2): <units>

units (NR1): Reference Appendix A.

Query Response: :METERs:MFERRor:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

4.12.9 Mean Frequency Error - Peak Measurement Reset

:METERs:MFERRor:CLEAR:PEAK

Description: Command clears and resets Peak Mean Frequency Error measurement.

Parameter/Query: none

4.12.10 Mean Frequency Error - Units

:METERs:MFERRor:UNIts
:METERs:MFERRor:UNIts?

Description: Set command defines the unit of measurement for Mean Frequency Error measurement.
Query command returns parameter setting.

Parameter: Hz | PPM

Default Value: dBm

Set/Query Format: CPD

Example: :METERs:MFERRor:UNIts Hz
Displays Mean Frequency Error measurement in Hertz

Query Response: :METERs:MFERRor:UNIts?
HZ

4.12.11 Peak Vector Error - Averages

:METERs:VPEak:AVERaging
:METERs:VPEak:AVERaging?

Description: Set command defines number of readings taken to calculate Average Peak Vector Error measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:VPEak:AVERaging 100
Sets the number of readings taken to calculate Average Peak Vector Error measurement to 100.

Query Response: :METERs:VPEak:AVERaging?
100

4.12.12 Peak Vector Error - Average Measurement Reset

:METERs:VPEak:CLEAR:AVG

Description: Command clears and resets Average Peak Vector Error measurement.

Parameter/Query: none

4.12.13 Peak Vector Error - Measurement Query

:METERs:VPEak:STATus?

Description: Command returns Peak Vector Error measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:VPEak:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

4.12.14 Peak Vector Error - Peak Measurement Reset

:METERs:VPEak:CLEAR:PEAK

Description: Command clears and resets Peak Vector Error measurement.

Parameter/Query: none

4.12.15 RMS Vector Error - Averages

:METERs:VRMS:AVERaging
:METERs:VRMS:AVERaging?

Description: Set command defines number of readings taken to calculate Average RMS Vector Error measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:VRMS:AVERaging 100
Sets the number of readings taken to calculateAverage RMS Vector Error measurement to 100.

Query Response: :METERs:VRMS:AVERaging?
100

4.12.16 RMS Vector Error - Average Measurement Reset

:METERs:VRMS:CLEAR:AVG

Description: Command clears and resets Average Power measurement.

Parameter/Query: none

4.12.17 RMS Vector Error - Measurement Query

:METERs:VRMS:STATus?

Description: Command returns RMS Vector Error measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:VRMS:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

4.12.18 RMS Vector Error - Peak Measurement Reset

:METERs:VRMS:CLEAR:PEAK

Description: Command clears and resets RMS Vector Error measurement.

Parameter/Query: none

4.12.19 Signal Power - Averages

:METERs:POWer:AVERaging
:METERs:POWer:AVERaging?

Description: Set command defines number of readings taken to calculate Average Signal Power measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:POWer:AVERaging 100
Sets the number of readings taken to calculateAverage Signal Power measurement to 100.

Query Response: :METERs:POWer:AVERaging?
100

4.12.20 Signal Power - Average Measurement Reset

:METERs:POWer:CLEAR:AVG

Description: Command clears and resets Average Power measurement.

Parameter/Query: none

4.12.21 Signal Power - Measurement Query

:METERs:POWer:STATus?

Description: Command returns Signal Power measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:POWer:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

4.12.22 Signal Power - Peak Measurement Reset

:METERs:POWer:CLEAR:PEAK

Description: Command clears and resets Peak Signal Power measurement.

Parameter/Query: none

4.13 CONSTELLATION GRAPH

4.13.1 Constellation - Enable Trace

:CONStellation:TRACe:ENABle
:CONStellation:TRACe:ENABle?

Description: Set command Enables/Disables Constellation trace.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: NR1

Example: :CONStellation:TRACe:ENABle 1
Enables Constellation trace.

Query Response: :CONStellation:TRACe:ENABle?
1

4.13.2 Constellation - Trace Mode (Single or Continuous)

:CONStellation:TRACe:REPEat
:CONStellation:TRACe:REPEat?

Description: Set command sets trace mode on Constellation graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :CONStellation:TRACe:REPEat OFF
Sets Constellation Graph to acquire a single trace.

Query Response: :CONStellation:TRACe:REPEat?
0

4.13.3 Constellation - Trace Query

:CONStellation:TRACe:LIVE?

Description: Command returns graph coordinates of Channel.

Query Data: <statusbyte>,<symbols>,<#pairs>,<x data>,<y data>

statusbyte (NR1): 0 = Invalid
1 = Valid

symbols: bitmask

#pairs (NR1): Number of x,y coordinate pairs to follow

x, y data (NR2): coordinate value

Query Response: :CONStellation:TRACe:LIVE?
1,1,12,-1.00,0.06,-0.82,0.57,-0.87,-0.49,0.76,0.65,0.76,-0.65,-0.87,0.49,-0.82,-0.57,-1.00,-0.06,0.94,-0.33,-0.79,-0.62,-0.79,0.62,0.94,0.33
Query data is for 25 kHz signal, SYNC data.

NOTE
Pair count is dependent on bandwidth and symbol type.
50 kHz bandwidth returns twice the number of data pairs as 25 kHz bandwidth.

Sync: 12 pair

Pilot: 24 pair

Header: 32 pair

Data: 204 pair

4.13.4 Constellation - Symbol Type

:CONStellation:TRACe:SYMbols
:CONStellation:TRACe:SYMbols?

Description: Set command Enables/Disables symbols on Constellation graph.
Query command returns parameter setting.

Parameter: Bitmask
0x01 = Sync
0x02 = Pilot
0x04 = Data
0x08 = Header

Default Value: 15 (All symbols enabled)

Set/Query Format: Decimal

Example: :CONStellation:TRACe:SYMbols 5
Enables Sync and Pilot symbols.

Query Response: :CONStellation:TRACe:SYMbols?
5

NOTE
At least one symbol must be enabled to obtain valid constellation query data.

4.14 MAGNITUDE ERROR GRAPH

4.14.1 Magnitude Error - Live Trace

:MAGnitude:TRACe:LIVE?

Description: Command returns Magnitude Error trace data.

Query Data: <statusbyte>,<#readings>,<ascii data string>

statusbyte (NR1): 0 = Invalid
1 = Valid

 # (NR1): indicates number of readings to follow, number depends bandwidth

25 kHz: 272

50 kHz: 544

100 kHz: 1088

0 kHz: 1632

data (NR2): trace readings

Query Response: :MAGnitude:TRACe:LIVE?

(valid) 1,544,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.38,0.00,3.61,0.00,0.86,0.00,2.62,0.13,0.00,0.47,0.00,3.20,0.00,3.95,0.00,0.20,2.18,1.25,0.70,1.16,0.86,.....

Query Response: :MAGnitude:TRACe:LIVE?

(invalid) 0,0.00

4.14.2 Magnitude Error - Lower Limit Value

:MAGnitude:TRACe:LOWer:LIMit
:MAGnitude:TRACe:LOWer:LIMit?

Description: Set command defines Lower Limit Value for Magnitude Error graph.
Query command returns parameter setting.

Range: -25 to +25%

Units: %

Default Value: -25%

Set/Query Format: NRf | NR2

Example: :MAGnitude:TRACe:LOWer:LIMit 0
Sets Lower Limit Value for Magnitude Error graph to 0%.

Query Response: :MAGnitude:TRACe:LOWer:LIMit?
0

4.14.3 Magnitude Error - Marker Coupling

:MAGnitude:TRACe:MARKER:COUPling
:MAGnitude:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :MAGnitude:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :MAGnitude:TRACe:MARKER:COUPling?
1

NOTE
Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

4.14.4 Magnitude Error - Marker Delta X

:MAGnitude:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :MAGnitude:TRACe:MARKER:DELTa:X?
225

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

4.14.5 Magnitude Error - Marker Delta Y

:MAGnitude:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :MAGnitude:TRACe:MARKER:DELTa:Y?
0.5008578300

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

4.14.6 Magnitude Error - Marker Position

:MAGnitude:TRACe:MARKn:XPOS
:MAGnitude:TRACe:MARKn:XPOS?

Description: Set command defines specified Marker position on Magnitude Error graph.
Query command returns parameter setting.

Range: bandwidth dependent (see below)

25 kHz: 0 to 271
50 kHz: 0 to 543
100 kHz 0 to 1087
150 kHz: 0 to 1631

Units:

Default Value: 0

Set/Query Format: NRf | NR2

Example: :MAGnitude:TRACe:MARK2:XPOS 150
Positions Marker 2 at 150.

Query Response: :MAGnitude:TRACe:MARK2:XPOS?
150

NOTE MARKn = 1 or 2 (Marker 1 or 2).

4.14.7 Magnitude Error - Marker Query Y Value

:MAGnitude:TRACe:MARKn:YVALue?

Description: Query command returns Magnitude Error Y value for specified Marker.

Query Data: <statusbyte>,<value>

<statusbyte>: 0 = Invalid
1 = Valid

value (NR2): reading at marker

Query Response: :MAGnitude:TRACe:MARK2:YVALue?
1, 0.00

NOTE MARKn = 1 or 2 (Marker 1 or 2). Marker must be enabled to return valid data.

4.14.8 Magnitude Error - Trace Mode (Single or Continuous)

:MAGnitude:TRACe:REPEat
:MAGnitude:TRACe:REPEat?

Description: Set command sets trace mode on Magnitude Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :MAGnitude:TRACe:REPEat OFF
Sets Magnitude Error Graph to acquire a single trace.

Query Response: :MAGnitude:TRACe:REPEat?
0

4.14.9 Magnitude Error - Upper Limit Value

:MAGnitude:TRACe:UPPer:LIMit
:MAGnitude:TRACe:UPPer:LIMit?

Description: Set command defines Lower Limit Value for Magnitude Error graph.
Query command returns parameter setting.

Range: -25 to +25%

Units: %

Default Value: +25%

Set/Query Format: NRf | NR2

Example: :MAGnitude:TRACe:UPPer:LIMit 10
Sets Upper Limit Value for Magnitude Error graph to 10%.

Query Response: :MAGnitude:TRACe:UPPer:LIMit?
10

4.15 PHASE ERROR GRAPH

4.15.1 Phase Error - Live Trace

:PHASe:TRACe:LIVE?

Description: Command returns Phase Error trace data.

Query Data: <statusbyte>,<#readings>,<ascii data string>

statusbyte (NR1): 0 = Invalid
1 = Valid

 # (NR1): indicates number of readings to follow, number depends bandwidth

25 kHz: 272

50 kHz: 544

100 kHz: 1088

0 kHz: 1632

data (NR2): trace readings

Query Response: :PHASe:TRACe:LIVE?

(valid) 1,544,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.75,0.00,-1.29,0.00,-2.48,0.00,0.28,-2.34,0.00,-0.22,0.00,-0.11,0.00,1.63,0.00,1.93,-0.65,-0.63,-0.17,0.55,-2.48,0.12,-0.29,-1.79,0.42,0.08,-0.14,1.07,2.36,1.64,2.41,-0.44,1.35,0.18,0.38,-1.58,-1.77,0.57,-1.48,-0.15,0.25,0.29,0.64,-0.04,-4.41,

Query Response: :PHASe:TRACe:LIVE?

(invalid) 0,0.00

4.15.2 Phase Error - Lower Limit Value

:PHASe:TRACe:LOWer:LIMit
:PHASe:TRACe:LOWer:LIMit?

Description: Set command defines Lower Limit Value for Vector Error graph.
Query command returns parameter setting.

Range: -15 to +15%

Units: %

Default Value: -15%

Set/Query Format: NRf | NR2

Example: :PHASe:TRACe:LOWer:LIMit 5
Sets Lower Limit Value for Vector Error graph to 5%.

Query Response: :PHASe:TRACe:LOWer:LIMit?
5

4.15.3 Phase Error - Marker Coupling

:PHASe:TRACe:MARKER:COUPling
:PHASe:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :PHASe:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :PHASe:TRACe:MARKER:COUPling?
1

NOTE
Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

4.15.4 Phase Error - Marker Delta X

:PHASe:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PHASe:TRACe:MARKER:DELTa:X?
125

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

4.15.5 Phase Error - Marker Delta Y

:PHASe:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PHASe:TRACe:MARKER:DELTa:Y?
2.0387158394

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

4.15.6 Phase Error - Marker Position

:PHASe:TRACe:MARKn:XPOS
:PHASe:TRACe:MARKn:XPOS?

Description: Set command defines specified Marker position on Phase Error graph.
Query command returns parameter setting.

Range: bandwidth dependent (see below)

25 kHz: 0 to 271
50 kHz: 0 to 543
100 kHz 0 to 1087
150 kHz: 0 to 1631

Units: symbol position

Default Value: 0

Set/Query Format: NRf | NR2

Example: :PHASe:TRACe:MARK2:XPOS 150
Positions Marker 2 at 150.

Query Response: :PHASe:TRACe:MARK2:XPOS?
150

NOTE MARKn = 1 or 2 (Marker 1 or 2).

4.15.7 Phase Error - Marker Query Y Value

:PHASe:TRACe:MARKn:YVALue?

Description: Query command returns Phase Error Y value for specified Marker.

Query Data: <statusbyte>,<value>

<statusbyte>: 0 = Invalid
1 = Valid

value (NR2): reading at marker

Query Response: :PHASe:TRACe:MARK2:YVALue?
0.03

NOTE MARKn = 1 or 2 (Marker 1 or 2). Marker must be enabled to return valid data.

4.15.8 Phase Error - Trace Mode (Single or Continuous)

:PHASe:TRACe:REPEat
:PHASe:TRACe:REPEat?

Description: Set command sets trace mode on Phase Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :PHASe:TRACe:REPEat OFF
Sets Phase Error Graph to acquire a single trace.

Query Response: :PHASe:TRACe:REPEat?
0

4.15.9 Phase Error - Upper Limit Value

:PHASe:TRACe:UPPer:LIMit
:PHASe:TRACe:UPPer:LIMit?

Description: Set command defines Lower Limit Value for Phase Error graph.
Query command returns parameter setting.

Range: -15 to +15%

Units: %

Default Value: +15%

Set/Query Format: NRf | NR2

Example: :PHASe:TRACe:UPPer:LIMit 10
Sets Upper Limit Value for Phase Error graph to 10%.

Query Response: :PHASe:TRACe:UPPer:LIMit?
10

4.16 POWER OVER BURST

4.16.1 Signal Power - Averages

:METERs:POWer:AVERaging
:METERs:POWer:AVERaging?

Description: Set command defines number of readings taken to calculate Average Signal Power measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:POWer:AVERaging 100
Sets the number of readings taken to calculateAverage Signal Power measurement to 100.

Query Response: :METERs:POWer:AVERaging?
100

4.16.2 Power Over Bursts - Trace Enable

:PBURst:TRACe:ENABle
:PBURst:TRACe:ENABle?

Description: Set command Enables/Disables Power Over Bursts trace.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :PBURst:TRACe:ENABle ON
Enables Power Over Bursts trace.

Query Response: :PBURst:TRACe:ENABle?
1

NOTE Trace must be enabled (ON) to return valid data.

4.16.3 Power Over Bursts - Marker Delta X

:PBURst:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PBURst:TRACe:MARKER:DELTa:X?
5.0

NOTE Marker 1 and Marker 2 must both be enabled to return valid data.

4.16.4 Power Over Bursts - Marker Delta Y

:PBURst:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PBURst:TRACe:MARKER:DELTa:Y?
0.167

NOTE Marker 1 and Marker 2 must both be enabled to return valid data.

4.16.5 Power Over Bursts - Marker Coupling

:PBURst:TRACe:MARKER:COUPling
:PBURst:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :PBURst:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :PBURst:TRACe:MARKER:COUPling?
1

NOTE Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

4.16.6 Power Over Bursts - Marker Position

:PBURst:TRACe:MARKn:XPOS
:PBURst:TRACe:MARKn:XPOS?

Description: Set command defines Marker position on Power Over Bursts graph.
Query command returns parameter setting.

Range: 0 to 14.167 ms

Units: ms

Default Value: 0.0 ms

Set/Query Format: NRf | NR2

Example: :PBURst:TRACe:MARK2:XPOS 10ms
Positions Marker 2 for Slot 1 to 10 ms.

Query Response: :PBURst:TRACe:MARK2:XPOS?
10.0

NOTE MARKn = 1 or 2 (Marker 1 or 2)

4.16.7 Power Over Bursts - Marker Y Value Query

:PBURst:TRACe:MARKn:YVALue?

Description: Command returns Power Over Bursts Y value for Marker.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Invalid
1 = Valid
2 = Inaccurate

value (NR2): dBm

Query Response: :PBURst:TRACe:MARK2:YVALue?
1,10.44

NOTE
MARKn = 1 or 2 (Marker 1 or 2)
Marker must be enabled to return valid data.

4.16.8 Power Over Bursts - Trace Data Query

:PBURst:TRACe:LIVE?

Description: Command returns Power Over Bursts graph data.

Query Data: <statusbyte>,<#pairs>,<x data>,<y data>

statusbyte (NR1): 0 = Invalid
1 = Valid
2 = Inaccurate

#pairs (NR1): Number of x,y coordinate pairs to follow

x, y data (NR2): coordinate value

Query Response: :PBURst:TRACe:LIVE?
1,931,0.00,2.63,0.02,-2.24,0.03,-11.90,0.05,.....

NOTE
Trace must be enabled (ON) to return valid data.

4.16.9 Power Over Bursts - Trace Mode (Single or Continuous)

:PBURst:TRACe:REPEat
:PBURst:TRACe:REPEat?

Description: Set command sets trace mode on Power Over Bursts graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :PBURst:TRACe:REPEat OFF
Sets Power Over Bursts Graph to acquire a single trace.

Query Response: :PBURst:TRACe:REPEat?
0

4.17 VECTOR ERROR GRAPH

4.17.1 Vector Error - Live Trace

:VECtor:TRACe:LIVE?

Description: Command returns Vector Error trace data.

Query Data: <statusbyte>,<#readings>,<ascii data string>

statusbyte (NR1): 0 = Invalid
1 = Valid

 # (NR1): indicates number of readings to follow, number depends bandwidth

25 kHz: 272

50 kHz: 544

100 kHz: 1088

0 kHz: 1632

data (NR2): trace readings

Query Response: :VECtor:TRACe:LIVE?
(valid) 1,272,-1.00,-0.82,-0.87,0.76,0.76,-0.87,-0.82,-1.00....

Query Response: :VECtor:TRACe:LIVE?
(invalid) 0,0.00

4.17.2 Vector Error - Lower Limit Value

:VECtor:TRACe:LOWer:LIMit
:VECtor:TRACe:LOWer:LIMit?

Description: Set command defines Lower Limit Value for Vector Error graph.
Query command returns parameter setting.

Range: 0 to 20%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :VECtor:TRACe:LOWer:LIMit 5
Sets Lower Limit Value for Vector Error graph to 5%.

Query Response: :VECtor:TRACe:LOWer:LIMit?
5

4.17.3 Vector Error - Marker Coupling

:VECtor:TRACe:MARKER:COUPling
:VECtor:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :VECtor:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :VECtor:TRACe:MARKER:COUPling?
1

NOTE
Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

4.17.4 Vector Error - Marker Delta X

:VECtor:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR1

Query Response: :VECtor:TRACe:MARKER:DELTa:X?
125

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

4.17.5 Vector Error - Marker Delta Y

:VECtor:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :VECtor:TRACe:MARKER:DELTa:Y?
0.9528354406

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

4.17.6 Vector Error - Marker Position

:VECtor:TRACe:MARKn:XPOS
:VECtor:TRACe:MARKn:XPOS?

Description: Set command defines specified Marker position on Vector Error graph.
Query command returns parameter setting.

Range: bandwidth dependent (see below)

25 kHz: 0 to 271
50 kHz: 0 to 543
100 kHz 0 to 1087
150 kHz: 0 to 1631

Units: symbol position

Default Value: 0

Set/Query Format: NRf | NR2

Example: :VECtor:TRACe:MARK2:XPOS 150.
Positions Marker 2 at 150.

Query Response: :VECtor:TRACe:MARK2:XPOS?
150

NOTE MARKn = 1 or 2 (Marker 1 or 2).

4.17.7 Vector Error - Marker Query Y Value

:VECtor:TRACe:MARKn:YVALue?

Description: Query command returns Vector Error Y value for specified Marker.

Query Data: <statusbyte>,<value>

<statusbyte>: 0 = Invalid
1 = Valid

value (NR2): reading at marker

Query Response: :VECtor:TRACe:MARK2:YVALue?
1,2.74

NOTE MARKn = 1 or 2 (Marker 1 or 2). Marker must be enabled to return valid data.

4.17.8 Vector Error - Trace Mode (Single or Continuous)

:VECtor:TRACe:REPEat
:VECtor:TRACe:REPEat?

Description: Set command sets trace mode on Vector Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :VECtor:TRACe:REPEat OFF
Sets Vector Error Graph to acquire a single trace.

Query Response: :VECtor:TRACe:REPEat?
0

4.17.9 Vector Error - Upper Limit Value

:VECtor:TRACe:UPPer:LIMit
:VECtor:TRACe:UPPer:LIMit?

Description: Set command defines Upper Limit Value for Vector Error graph.
Query command returns parameter setting.

Range: 0 to 20%

Units: %

Default Value: 20%

Set/Query Format: NRf | NR2

Example: :VECtor:TRACe:UPPer:LIMit 10
Sets Upper Limit Value for Vector Error graph to 10%

Query Response: :VECtor:TRACe:UPPer:LIMit?
10

THIS PAGE INTENTIONALLY LEFT BLANK.

Chapter 5 - TETRA MS Remote Commands

5.1 INTRODUCTION

This chapter lists the Remote Commands for configuring TETRA MS System Parameters. Remote Commands are listed alphabetically under the following Display Tile headings:

5.2 AUDIO TILE

5.2.1 AF Generators - Enable

:AF:GENerator:SOURceN:ENABle
:AF:GENerator:SOURceN:ENABle?

Description:	Set command Enables/Disables the specified AF Generator. Query command returns parameter setting.
Parameter:	OFF | ON | 0 | 1
Default Value:	OFF
Set/Query Format:	Boolean
Example:	:AF:GENerator:SOURce2:ENABle ON Enables AF Generator 2.
Query Response:	:AF:GENerator:SOURce2:ENABle? 1
NOTE	SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

5.2.2 AF Generators - Frequency

:AF:GENerator:SOURceN:FREQuency
:AF:GENerator:SOURceN:FREQuency?

Description: Set command defines the frequency source for the specified AF Generator. Query command returns parameter setting.
Range: 1.0 Hz to 20.0 kHz
Units: Hz | kHz
Default Value:
AF 1: 1.0 kHz
AF 2: 300.0 Hz
AF 3: 3.4 kHz
Set/Query Format: NRf | NR2 (Hz)
Example: :AF:GENerator:SOURce3:FREQuency 15kHz
Sets AF Generator 3 Frequency to 15.0 kHz.
Query Response: :AF:GENerator:SOURce3:FREQuency?
15000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

5.2.3 AF Generators - Level

:AF:GENerator:SOURceN:LEVel
:AF:GENerator:SOURceN:LEVel? <units>

Description: Set command defines the Source Level for the specified AF Generator. Query command returns parameter setting in specified units.
Range: 1.0 mV to 5.0 Vrms
Units: dBm | V | mV | µV | nV | dBµV
Default Value: 100.0 mV
Set/Query Format: NRf | NR2 (mV)
Example: :AF:GENerator:SOURce1:LEVel 5V
Sets AF Generator 1 Level (Amplitude) to 5.0 Volts.
Query Response: :AF:GENerator:SOURce1:LEVel? nV
50000000000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

5.2.4 AF Generators - Waveform

:AF:GENerator:SOURceN:SHAPe
:AF:GENerator:SOURceN:SHAPe?

Description: Set command defines the Waveform for the specified AF Generator.
Query command returns parameter setting.

Parameter: SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF

Query Data: SNR | SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF | TONESEQ | TONEREM

Default Value: SINE

Set/Query Format: CPD | CRD

Example: :AF:GENerator:SOURce2:SHAPe SQUare
Sets AF Generator 2 Waveform shape to Square.

Query Response: :AF:GENerator:SOURce2:SHAPe?
SQU

NOTE

SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

DTMF waveform is only valid on AF Generator 1. AF Generator 2 is unavailable when DTMF is selected on AF Generator 1.

DCS and DCSINV are not supported on AF Generator 3.

AF Generator 1 is unavailable as a modulation source when Normal MOD SNR Noise Measurements are defined (:CONFigure:MOD:ANALyzer:SNR:MODE 1) and AF:GENerator:SOURce1:SHAPe? returns SNR.

5.2.5 AF Measurements - AF Level Audio Units

:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts
:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?

Description: Set command defines the unit of measure for AF Audio Level measurement.
Query command returns parameter setting.

Parameter: V | dBr | dBV | dBm | W

Default Value: V

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts DBR
Displays AF Level Audio measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?
DBR

5.2.6 AF Measurements - AF Level Balanced Units

:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts
:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?

Description: Set command defines the unit of measure for AF Balanced Level measurement.
Query command returns parameter setting.

Parameter: dBm | dBr | V

Default Value: dBm

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts DBR
Displays AF Balanced Level measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?
DBR

NOTE AF Measurement Source must be defined as BALANCED for command to be valid.

5.2.7 AF Measurements - Impedance Audio 1

:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?

Description: Set command defines the Impedance for Audio 1 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD UNBHI
Sets selected Audio 1 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?
INBHI

NOTE Sets Impedance of Audio 1 Input connector whether or not Audio 1 is defined as Audio Source.

5.2.8 AF Measurements - Impedance Audio 2

:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?

Description: Set command defines the Impedance for Audio 2 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD UNBHI
Sets selected Audio 2 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?
INBHI

NOTE Sets Impedance of Audio 2 Input connector whether or not Audio 2 is defined as Audio Source.

5.2.9 AF Measurements - Filter Type

:AF:ANALyzer:MFILter
:AF:ANALyzer:MFILter?

Description: Set command selects the Audio Analyzer Post Detection Filter.
Query command returns parameter setting.

Parameter: PSOPh | None | LP1 | LP2 | LP3 | LP4 | LP5 | LP6 | LP7 | HP1 | HP2 | HP3 | BP0 | BP1 | BP2 | BP3 | BP4 | BP5 | BP6 | BP7 | BP8 | BP9 | BP10 | BP11 | BP12 | BP13 | BP14 | BP15 | BP16

where:

NONE = No Filter	BP2 = 0.3 to 5.0 kHz BP
PSOPh = Psoph (CMESS or CCITT)	BP3 = 0.3 to 20.0 kHz BP
LP1 = 300.0 Hz LP	BP4 = 0.3 to 15.0 kHz BP
LP2 = 5.0 kHz LP	BP5 = 0.02 to 300.0 Hz BP
LP3 = 20.0 kHz LP	BP6 = 0.02 to 3.0 kHz BP
LP4 = 15.0 kHz LP	BP7 = 0.02 to 3.4 kHz BP
LP5 = 3.0 kHz LP	BP8 = 0.02 to 5.0 kHz BP
LP6 = 625.0 kHz LP*	BP9 = 0.02 to 15.0 kHz BP
LP7 = 10.0 kHz LP*	BP10 = 0.02 to 20.0 kHz BP
LP8 = 100.0 Hz LP*	BP11 = 0.05 to 300.0 Hz BP
HP1 = 300.0 Hz HP**	BP12 = 0.05 to 3.0 kHz BP
HP2 = 20.0 Hz HP	BP13 = 0.05 to 3.4 kHz BP
HP3 = 50.0 Hz HP	BP14 = 0.05 to 5.0 kHz BP
BP0 = 0.3 to 3.0 kHz BP	BP15 = 0.05 to 15.0 kHz BP
BP1 = 0.3 to 3.4 kHz BP	BP16 = 0.05 to 20.0 kHz BP

Default Value: NONE (No Filter)

Set/Query Format: CPD | CRD

Example: :AF:ANALyzer:MFILter LP3
Selects 20.0 kHz Low Pass Filter for AF measurements.

Query Response: :AF:ANALyzer:MFILter?
LP3

NOTE

Filter selected should be appropriate for signal received from UUT.
When PSOPH is selected, Filter weight is defined using :CONFigure:AF:MFILter command.
Test Set does not process any commands following this one until this command is completed.
*LP6, LP7 and LP8 are used by the Audio Analyzer Tracking Generator and can not be defined by user, but may be returned as query data.
**When HP1 (300 Hz HP) is selected, CONFigure:AF:HZ300FILter selects the type of 300 Hz filter being used.

5.2.10 AF Measurements - Source

:CONFigure:AF:ANALyzer:SOURce
:CONFigure:AF:ANALyzer:SOURce?

Description: Set command defines the Source for Audio Analyzer.
Query command returns parameter setting.

Parameter: AUD1 | AUD2 | BAL | MIC

Default Value: AUD1

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce MIC
Selects Microphone as the AF Analyzer Audio Source.

Query Response: :CONFigure:AF:ANALyzer:SOURce?
MIC

NOTE Test Set does not process any commands following this one until this command is completed.

5.2.11 AF Measurements - Query AF Frequency Measurement

:FETCh:AF:ANALyzer:FREQuency?

Description: Command returns AF Frequency measurement data.

Query Data: <statusbyte>, <avgcount>, <avg>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

avgcount (NR1): value

avg (NR2): Hz

Query Response: :FETCh:AF:ANALyzer:FREQuency?
0,25,1000.0

NOTE Statusbyte may return more than one condition as a bitmask.

5.2.12 AF Measurements - Query AF Level Measurement

:FETCh:AF:ANALyzer:LEVel?

Description: Command returns AF Level measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<units>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1):
0 = All limit checks passed
1 = Average upper failed limit
2 = Average lower failed limit

avgcount (NR1): value

avg (NR2):
mV (Unbalanced)
dBm (Balanced)

units (NR1):
6 = dBm
7 = V
11 = W
12 = mW
13 = µW
16 = dBr
17 = dBV
20 = nW

Query Response: :FETCh:AF:ANALyzer:LEVel?
0,0,1,0.002

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

5.2.13 AF Measurements - Query AF Sinad Measurement

:FETCh:AF:ANALyzer:SINad?

Description: Command returns AF Sinad measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<wc>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1): 0 = All limit checks passed
2 = Average lower failed limit
8 = Worst Case lower failed limit

avgcount (NR1): value

avg, wc (NR2): dB

Query Response: :FETCh:AF:ANALyzer:SINad?
0,0,25,0.01,0.00

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

5.2.14 Loudspeaker

:CONFigure:PORT:LOUDspeaker
:CONFigure:PORT:LOUDspeaker?

Description: Set command selects Loudspeaker port.
Query command returns parameter setting.

Parameter: OFF | AUDio | FAUDio | DEMod | DDEMod | FDEMod | FDDEMod

Default Value: OFF

Set/Query Format: CPD | CRD

Example: :CONFigure:PORT:LOUDspeaker AUDio
Selects Audio as the Loudspeaker port.

Query Response: :CONFigure:PORT:LOUDspeaker?
AUD

5.3 BASE SERVICES CONFIGURATION

5.3.1 Base Services - Advanced Link

:CONFigure:BSERvice:ALINk
:CONFigure:BSERvice:ALINk?

Description: Set command defines Base Service Advanced Link setting.
Query command returns parameter setting.

Parameter: NSUPported (Not Supported) | SUPPorted

Default Value: NSUPported

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:ALINk SUPPorted
Sets Advanced Link Base Service to Supported.

Query Response: :CONFigure:BSERvice:ALINk?
SUPP

5.3.2 Base Services - Air Interface Encryption

:CONFigure:BSERvice:ENCRyption
:CONFigure:BSERvice:ENCRyption?

Description: Set command defines Base Service Air Interface Encryption setting.
Query command returns parameter setting.

Parameter: NAVailable (Not Available) | AVAilable

Default Value: NAVailable

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:ENCRyption AVAilable
Sets Base Service Air Encryption to Available.

Query Response: :CONFigure:BSERvice:ENCRyption?
AVA

5.3.3 Base Services - Circuit Mode Data Service

:CONFigure:BSERvice:CMData
:CONFigure:BSERvice:CMData?

Description: Set command defines Base Service Circuit Mode Data Service setting.
Query command returns parameter setting.

Parameter: NSUPported (Not Supported) | SUPPorted

Default Value: NSUPported

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:CMData SUPPorted
Sets Circuit Mode Data Service for Base Service to Supported.

Query Response: :CONFigure:BSERvice:CMData?
SUPP

5.3.4 Base Services - Default Values

:CONFigure:BSERvice:DEFault

Description: Command restores Base Service fields to default settings.

Parameter/Query: none

5.3.5 Base Services - Migration

:CONFigure:BSERvice:MIGRation
:CONFigure:BSERvice:MIGRation?

Description: Set command defines Base Service Migration setting.
Query command returns parameter setting.

Parameter: NSUPported (Not Supported) | SUPPorted

Default Value: SUPPorted

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:MIGRation NSUPPorted
Sets Migration for Base Service to Not Supported.

Query Response: :CONFigure:BSERvice:MIGRation?
NSUP

5.3.6 Base Services - Minimum Mode Service

:CONFigure:BSERvice:MMODe
:CONFigure:BSERvice:MMODe?

Description: Set command defines Base Service Minimum Mode Service setting.
Query command returns parameter setting.

Parameter: NUSed (Never Used) | MBUSed (May Be Used)

Default Value: Never Used

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:MMODe NUSed
Sets Minimum Mode Service for Base Services to Not Used.

Query Response: :CONFigure:BSERvice:MMODe?
NUS

5.3.7 Base Services - Power Off Deregistration

:CONFigure:BSERvice:DREG
:CONFigure:BSERvice:DREG?

Description: Set command defines Base Service Power Off De-Registration setting.
Query command returns parameter setting.

Parameter: NREQuired (Not Required) | REQuired

Default Value: Required

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:DREG NREQuired
Sets Power Off De-registration to Not Required.

Query Response: :CONFigure:BSERvice:DREG?
NREQ

5.3.8 Base Services - Power On Registration

:CONFigure:BSERvice:REGistration
:CONFigure:BSERvice:REGistration?

Description: Set command defines Base Service Power On Registration setting.
Query command returns parameter setting.

Parameter: NREQuired (Not Required) | REQuired

Default Value: Required

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:REGistration NREQuired
Sets Power On Registration to Not Required.

Query Response: :CONFigure:BSERvice:REGistration?
NREQ

5.3.9 Base Services - Priority Cell

:CONFigure:BSERvice:PCELI
:CONFigure:BSERvice:PCELI?

Description: Set command defines Base Service Priority Cell setting.
Query command returns parameter setting.

Parameter: NO | YES

Default Value: YES

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:PCELI NO
Sets Priority Cell setting to NO.

Query Response: :CONFigure:BSERvice:PCELI?
NO

5.3.10 Base Services - Reserved

:CONFigure:BSERvice:REServed
:CONFigure:BSERvice:REServed?

Description: Set command defines Base Service Reserved setting.
Query command returns parameter setting.

Parameter: NAVailable (Not Available) | AVAilable

Default Value: NAVailable

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:REServed AVAilable
Sets Base Service Reserved setting to Available.

Query Response: :CONFigure:BSERvice:REServed?
AVA

5.3.11 Base Services - System Wide Services

:CONFigure:BSERvice:SWIDe
:CONFigure:BSERvice:SWIDe?

Description: Set command defines Base Service System Wide Services setting.
Query command returns parameter setting.

Parameter: NSUPported (Not SUpported) | NORMal (Normal Mode)

Default Value: Normal Mode

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:SWIDe NSUPported
Sets System Wide Services to Not Supported.

Query Response: :CONFigure:BSERvice:SWIDe?
NSUP

5.3.12 Base Services - TETRA Packet Data Service

:CONFigure:BSERvice:PDATa
:CONFigure:BSERvice:PDATa?

Description: Set command defines Base Service TETRA Packet Data Service setting.
Query command returns parameter setting.

Parameter: NAVailable (Not Available) | AVAilable

Default Value: NAVailable

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:PDATa AVAilable
Sets Base Service TETRA Packet Data Service to Available.

Query Response: :CONFigure:BSERvice:PDATa?
AVA

5.3.13 Base Services - TETRA Voice Service

:CONFigure:BSERvice:VOICe
:CONFigure:BSERvice:VOICe?

Description: Set command defines Base Service TETRA Voice Service setting.
Query command returns parameter setting.

Parameter: NSUPported (Not Supported) | SUPPorted

Default Value: SUPPorted

Set/Query Format: CPD | CRD

Example: :CONFigure:BSERvice:VOICe NSUPPorted
Sets TETRA Voice Service for Base Service to Not Supported.

Query Response: :CONFigure:BSERvice:VOICe?
NSUP

5.4 CHANNEL PLAN CONFIGURATION

5.4.1 Channel Plan - Channel Plan Information

:CONFigure:CHPLan:INFO?

Description: Command returns information about current Channel Plan.

Query Data: <plan_name>,<frequency band>,<offset>,<duplex spacing>,
<reverse operation>,<block 1 lowest channel>,<block 1 highest channel>,
<block 1 lowest channel downlink freq>,<block 1 duplex offset>,
<block 1 channel spacing>,<block 2 state>,<block 2 lowest channel>,
<block 2 highest channel>,<block 2 lowest channel downlink freq>,
<block 2 duplex offset>,<block 2 channel spacing>

Plan Name: ascii string
Frequency Band: NR1
Offset: NR1 (Hz)
Duplex Spacing: NR1 (Hz)
Reverse Operation: NR1
Lowest Channel: NR1 (Hz)
Highest Channel: NR1
Low Ch DLink Freq: NR1
Duplex Offset: NR1 (Hz)
Channel Spacing: NR1 (Hz)
Block 2 State: CRD

Query Response: :CONFigure:CHPLan:INFO?
"TETRA 380-400 +12.5",3,3,0,0,3600,3999,390012500,100000000,2500,
EXCL,0,0,0,0,0

5.4.2 Channel Plan - Delete Channel Plan

:CONFigure:CHPLan:DELete

Description: Command deletes specified custom Channel Plan.

Parameter: ascii string

Example: :CONFigure:CHPLan:DELete "test_plan"
Deletes Channel Plan named 'test_plan'.

Query Response: no query

NOTE Command only applies to customized Channel Plans: Pre-defined Channel Plans can not be deleted.

5.4.3 Channel Plan - Load Channel Plan

:CONFigure:CHPLan:LOAD
:CONFigure:CHPLan:LOAD?

Description: Set command loads named plan as current Channel Plan.
Query command returns name of Channel Plan currently loaded.

Parameter: file name

Default Value: TETRA 380-400 +12.5

Set/Query Format: ascii string | ascii response data

Example: :CONFigure:CHPLan:LOAD “TETRA 380-400 ZERO”
Loads TETRA 380-400 ZERO Channel Plan.

Query Response: :CONFigure:CHPLan:LOAD?
TETRA 380-400 ZERO

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

5.4.4 Channel Plan - New Channel Plan

:CONFigure:CHPLan:NEW

Description: Command creates new Channel Plan.

Parameters: <plan_name>,<frequency band>,<offset>,<duplex spacing>,<reverse operation>,<block 1 data>,<block 2 data>

		Parameter/Range	Format	Default
	Plan Name	20 character max	ascii string	
System Info	**Freq Band**	0 to 15	NR1	
	Offset	0 to 3	NR1	
	Duplex Spacing	0 to 7	NR1	
	Reverse Operation	0 | 1	NR1	
Block 1	**Lowest Channel**	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies
Block 2	**State**	INCL | EXCL	CPD	varies
	Lowest Channel	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies

Example: :CONFigure:CHPlan:NEW
“test_plan”,3,3,0,0,3600,3999,390012500,100000000,2500,EXCL,0,0,0,0,0

NOTE
Default values vary according to selected Channel Plan.
no query

5.5 CALL TIMERS & TRUNKING CONFIGURATION

5.5.1 Call Timers & Trunking - Group Call Hang Timer

:CONFigure:CTIMers:HANG
:CONFigure:CTIMers:HANG?

Description: Set command sets Group Call Hang Timer.
Query command returns parameter setting.

Range: 1 to 30 seconds

Units: seconds

Default Value: 15 seconds

Set/Query Format: NRf | NR1

Example: :CONFigure:CTIMers:HANG 15
Sets Group Call Hang Time to 15 seconds.

Query Response: :CONFigure:CTIMers:HANG?
15

5.5.2 Call Timers & Trunking - Quasi Tx Trunking Hang Timer

:CONFigure:CTIMers:QUASi
:CONFigure:CTIMers:QUASi?

Description: Set command defines Quasi Tx Trunking Hang Timer.
Query command returns parameter setting.

Range: 1 to 30 seconds

Units: seconds

Default Value: 5 seconds

Set/Query Format: NRf | NR1

Example: :CONFigure:CTIMers:QUASi 15
Sets Quasi Tx Trunking Hang Timer to 15 seconds.

Query Response: :CONFigure:CTIMers:QUASi?
15

5.5.3 Call Timers & Trunking - Simplex Traffic Channel Type

:CONFigure:TRUNking:STCType
:CONFigure:TRUNking:STCType?

Description: Set command sets Trunking Call Timers Simplex Traffic Channel Type.
Query command returns parameter setting.

Parameter: DLULtch | FACCh
(Downlink and Uplink Traffic Channel) | (Fast Associated Control Channel)

Default Value: FACCh

Set/Query Format: CPD | CRD

Example: :CONFigure:TRUNking:STCType DLUL
Sets Simplex Traffic Channel Type to DL and UL TCH.

Query Response: :CONFigure:TRUNking:STCType?
DLUL

5.5.4 Call Timers & Trunking - Test Set Call Abort Mode

:CONFigure:CTIMers:TSABort:MODE
:CONFigure:CTIMers:TSABort:MODE?

Description: Set command selects Test Set Call Abort Mode.
Query command returns parameter setting.

Parameter: MANual | AUTO

Default Value: Auto

Set/Query Format: CPD | CRD

Example: :CONFigure:CTIMers:TSABort:MODE MANual
Sets Test Set Call Abort Mode to Manual.

Query Response: :CONFigure:CTIMers:TSABort:MODE?
MAN

5.5.5 Call Timers & Trunking - Test Set Abort Time

:CONFigure:CTIMers:TSABort:TIME
:CONFigure:CTIMers:TSABort:TIME?

Description: Set command defines Test Set Auto Call Abort Time.
Query command returns parameter setting.

Range: 1 to 300 seconds

Units: seconds

Default Value: 65 seconds

Set/Query Format: NRf | NR1

Example: :CONFigure:CTIMers:TSABort:TIME 120
Sets Test Set Call Abort Time to 120 seconds.

Query Response: :CONFigure:CTIMers:TSABort:TIME?
120

5.5.6 Call Timers & Trunking - Test Set Answer Mode

:CONFigure:CTIMers:TSANswer:MODE
:CONFigure:CTIMers:TSANswer:MODE?

Description: Set command defines Test Set Answer Mode.
Query command returns parameter setting.

Parameter: MANual | AUTO

Default Value: Auto

Set/Query Format: CPD | CRD

Example: :CONFigure:CTIMers:TSANswer:MODE MANual
Sets Test Set Answer Mode to Manual.

Query Response: :CONFigure:CTIMers:TSANswer:MODE?
MAN

5.5.7 Call Timers & Trunking - Test Set Answer Time

:CONFigure:CTIMers:TSANswer:TIME
:CONFigure:CTIMers:TSANswer:TIME?

Description: Set command defines Test Set Auto Answer Time.
Query command returns parameter setting.
Range: 0 to 30 seconds
Units: seconds
Default Value: 2 seconds
Set/Query Format: NRf | NR1
Example: :CONFigure:CTIMers:TSANswer:TIME 5
Sets Test Set Auto Answer to 5 seconds.
Query Response: :CONFigure:CTIMers:TSANswer:TIME?
5

5.5.8 Call Timers & Trunking - Test Set Quiet TIme

:CONFigure:CTIMers:QUIEt
:CONFigure:CTIMers:QUIEt?

Description: Set command defines Test Set Quiet Time.
Query command returns parameter setting.
Range: 0 to 30 seconds
Units: seconds
Default: 2 seconds
Set/Query Format: NRf | NR1
Units: seconds
Example: :CONFigure:CTIMers:QUIEt 15
Sets Test Set Quiet Time to 15 seconds.
Query Response: :CONFigure:CTIMers:QUIEt?
15

5.5.9 Call Timers & Trunking - Test Set Talkback Call Time Buffer

:CONFigure:CTIMers:TALKback
:CONFigure:CTIMers:TALKback?

Description: Set command defines Talkback Call Time Buffer.
Query command returns parameter setting.
Range: 1 to 30 seconds
Units: seconds
Default Value: 2 seconds
Set/Query Format: NRf | NR1
Example: :CONFigure:CTIMers:TALKback 10
Sets TalkBack Call Time Buffer to 10 seconds.
Query Response: :CONFigure:CTIMers:TALKback?
10

5.5.10 Call Timers & Trunking - Test Set Transmit Mode

:CONFigure:CTIMers:MODE
:CONFigure:CTIMers:MODE?

Description: Set command defines Test Set Transmit Mode of operation.
Query command returns parameter setting.

Parameter: NONe | TIMed | CONTinuous

Default Value: Timed

Set/Query Format: CPD | CRD

Example: :CONFigure:CTIMers:MODE CONTINUOUS
Sets Test Set Transmit Mode to Continuous.

Query Response: :CONFigure:CTIMers:MODE?
CONT

5.5.11 Call Timers & Trunking - Test Set Transmit Time

:CONFigure:CTIMers:TSTRansmit
:CONFigure:CTIMers:TSTRansmit?

Description: Set command defines Test Set Transmit Time.
Query command returns parameter setting.

Range: 1 to 30 seconds

Units: seconds

Default: 2 seconds

Set/Query Format: NRf | NR1

Example: :CONFigure:CTIMers:TSTRansmit 20
Sets Test Set Transmit Time to 20 seconds.

Query Response: :CONFigure:CTIMers:TSTRansmit?
20

5.5.12 Call Timers & Trunking - Test Set Trunking Mode

:CONFigure:TRUNking:MODE
:CONFigure:TRUNking:MODE?

Description: Set command sets Trunking Call Timers Test Set Trunking Mode.
Query command returns parameter setting.

Parameter: MESSage | TRANsmission | QUASi

Default Value: Message

Set/Query Format: CPD | CRD

Example: :CONFigure:TRUNking:MODE QUASi
Sets Test Set Transmit Mode to Quasi.

Query Response: :CONFigure:TRUNking:MODE?
QUAS

5.6 CALL TYPES CONFIGURATION - EMERGENCY CALL

5.6.1 Emergency Call - Call Mode

:CONFigure:CTYPe:EMERgency:SD
:CONFigure:CTYPe:EMERgency:SD?

Description: Set command defines Emergency Call mode of operation.
Query command returns parameter setting.

Parameter: SIMPlex | DUPLex

Default Value: Simplex

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:EMERgency:SD DUPLex
Sets Emergency Call to operate in Duplex Mode.

Query Response: :CONFigure:CTYPe:EMERgency:SD?
DUPL

5.6.2 Emergency Call - Call Participant

:CONFigure:CTYPe:EMERgency:GI
:CONFigure:CTYPe:EMERgency:GI?

Description: Set command defines Emergency Call participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:EMERgency:GI GROup
Sets Emergency Calls to Group call.

Query Response: :CONFigure:CTYPe:EMERgency:GI?
GRO

5.6.3 Emergency Call - Calling Party SSI

:CONFigure:CTYPe:EMERgency:SSI
:CONFigure:CTYPe:EMERgency:SSI?

Description: Set command defines Emergency Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:EMERgency:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:EMERgency:SSI?
123456

5.6.4 Emergency Call - Signaling Type

:CONFigure:CTYPe:EMERgency:STYPe
:CONFigure:CTYPe:EMERgency:STYPe?

Description: Set command defines Emergency Call Signaling Type.
Query command returns parameter setting.

Parameter: DIRect (Direct Setup) | HOOK (Hook Signaling)

Default Value: Direct

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:EMERgency:STYPe HOOK
Sets Emergency Call to use Hook Signaling.

Query Response: :CONFigure:CTYPe:EMERgency:STYPe?
HOOK

5.7 CALL TYPES CONFIGURATION - GROUP CALL

5.7.1 Group Call - Priority Setting

:CONFigure:CTYPe:GROup:PRIority
:CONFigure:CTYPe:GROup:PRIority?

Description: Set command defines Group Call Priority setting.
Query command returns parameter setting.

Parameter: 00 = Not Defined
01 = Level 1 (Lowest Priority) to 11 = Level 11 (Highest Priority)
12 = Pre-Emptive to 15 = Pre-Emptive 4 Emergency

Default Value: 00 (Not Defined)

Set/Query Format: NR1

Example: :CONFigure:CTYPe:GROup:PRIority 10
Sets Group Call Priority setting to 10.

Query Response: :CONFigure:CTYPe:GROup:PRIority?
10

5.7.2 Group Call - Calling Party SSI

:CONFigure:CTYPe:GROup:SSI
:CONFigure:CTYPe:GROup:SSI?

Description: Set command defines Group Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:GROup:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:GROup:SSI?
123456

5.8 CALL TYPES CONFIGURATION - PHONE CALL

5.8.1 Phone Call - Calling Party ESN

:CONFigure:CTYPe:PHONe:ESN:NUMBer
:CONFigure:CTYPe:PHONe:ESN:NUMBer?

Description: Set command defines Phone Call Calling Party Number.
Query command returns parameter setting.

Parameter: phone number string, 24 character maximum

Default Value: 01438742200

Set/Query Format: number string

Example: :CONFigure:CTYPe:PHONe:ESN:NUMBer 0123456789
Sets Phone Call Calling Party ESN to 0123456789.

Query Response: :CONFigure:CTYPe:PHONe:ESN:NUMBer?
0123456789

5.8.2 Phone Call - ESN Mode

:CONFigure:CTYPe:PHONe:ESN:INCLude
:CONFigure:CTYPe:PHONe:ESN:INCLude?

Description: Set command defines Phone Call Calling Party ESN mode of operation.
Query command returns parameter setting.

Parameter: NINCluded (Not Included) | INCLuded (Included)

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:PHONe:ESN:INCLude NINCluded
Sets Phone Call Calling Party ESN to not be included.

Query Response: :CONFigure:CTYPe:PHONe:ESN:INCLude?
NINC

5.8.3 Phone Call - Priority Setting

:CONFigure:CTYPe:PHONe:PRIority
:CONFigure:CTYPe:PHONe:PRIority?

Description: Set command defines Phone Call Priority setting.
Query command returns parameter setting.

Parameter: 00 = Not Defined
01 = Level 1 (Lowest Priority) to 11 = Level 11 (Highest Priority)
12 = Pre-Emptive to 15 = Pre-Emptive 4 Emergency

Default Value: 00 (Not Defined)

Set/Query Format: NR1

Example: :CONFigure:CTYPe:PHONe:PRIority 10
Sets Phone Call Priority setting to 10.

Query Response: :CONFigure:CTYPe:PHONe:PRIority?
10

5.9 CALL TYPES CONFIGURATION - PRIVATE CALL

5.9.1 Private Call - Call Mode

:CONFigure:CTYPe:PRIVate:SD
:CONFigure:CTYPe:PRIVate:SD?

Description: Set command defines Private Call mode of operation.
Query command returns parameter setting.

Parameter: SIMPlex | DUPLex

Default Value: Simplex

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:PRIVate:SD DUPLex
Sets Private Call to operate in Duplex Mode.

Query Response: :CONFigure:CTYPe:PRIVate:SD?
DUPL

5.9.2 Private Call - Calling Party SSI

:CONFigure:CTYPe:PRIVate:SSI
:CONFigure:CTYPe:PRIVate:SSI?

Description: Set command defines Private Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:PRIVate:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:PRIVate:SSI?
123456

5.9.3 Private Call - Priority Setting

:CONFigure:CTYPe:PRIVate:PRIority
:CONFigure:CTYPe:PRIVate:PRIority?

Description: Set command defines Private Call Priority setting.
Query command returns parameter setting.

Parameter: 00 = Not Defined
01 = Level 1 (Lowest Priority) to 11 = Level 11 (Highest Priority)
12 = Pre-Emptive to 15 = Pre-Emptive 4 Emergency

Default Value: 00 (Not Defined)

Set/Query Format: NR1

Example: :CONFigure:CTYPe:PRIVate:PRIority 10
Sets Private Call Priority setting to 10.

Query Response: :CONFigure:CTYPe:PRIVate:PRIority?
10

5.9.4 Private Call - Signaling Type

:CONFigure:CTYPe:PRIVate:STYPe
:CONFigure:CTYPe:PRIVate:STYPe?

Description: Set command defines Private Call Signaling Type.
Query command returns parameter setting.

Parameter: DIRect (Direct Setup) | HOOK (Hook Signaling)

Default Value: Hook Signaling

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:PRIVate:STYPe Direct
Sets Private Call to use Direct Setup.

Query Response: :CONFigure:CTYPe:PRIVate:STYPe?
DIR

5.10 CALL TYPES CONFIGURATION - USER CALL

5.10.1 User Call - Calling Party ESN

:CONFigure:CTYPe:USER:ESN:NUMBer
:CONFigure:CTYPe:USER:ESN:NUMBer?

Description: Set command defines User Call Calling Party Number.
Query command returns parameter setting.

Parameter: phone number string, 24 character maximum

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:USER:ESN:NUMBer 0123456789
Sets User Call Calling Party ESN to 0123456789.

Query Response: :CONFigure:CTYPe:USER:ESN:NUMBer?
0123456789

5.10.2 User Call - Call Mode

:CONFigure:CTYPe:USER:SD
:CONFigure:CTYPe:USER:SD?

Description: Set command defines User Call mode of operation.
Query command returns parameter setting.

Parameter: SIMPlex | DUPLex

Default Value: DUPLex

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:USER:SD SIMPlex
Sets User Call to operate in Simplex Mode.

Query Response: :CONFigure:CTYPe:USER:SD?
SIMP

5.10.3 User Call - Call Participant

:CONFigure:CTYPe:USER:GI
:CONFigure:CTYPe:USER:GI?

Description: Set command defines User Call participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:USER:GI GROup
Sets User Calls to Group call.

Query Response: :CONFigure:CTYPe:USER:GI?
GRO

5.10.4 User Call - Calling Party SSI

:CONFigure:CTYPe:USER:SSI
:CONFigure:CTYPe:USER:SSI?

Description: Set command defines User Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 16777186 (PABX Gateway)

Set/Query Format: number string

Example: :CONFigure:CTYPe:USER:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:USER:SSI?
123456

5.10.5 User Call - ESN Mode

:CONFigure:CTYPe:USER:ESN:INCLude
:CONFigure:CTYPe:USER:ESN:INCLude?

Description: Set command defines User Call Calling Party ESN mode of operation.
Query command returns parameter setting.

Parameter: NINCluded (Not Included)
INCLuded (Included)

Default Value: Included

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:USER:ESN:INCLude NINCluded
Sets User Call Calling Party ESN to not be included.

Query Response: :CONFigure:CTYPe:USER:ESN:INCLude?
NINC

5.10.6 User Call - Priority Setting

:CONFigure:CTYPe:USER:PRIority
:CONFigure:CTYPe:USER:PRIority?

Description: Set command defines User Call Priority setting.
Query command returns parameter setting.

Parameter: 00 = Not Defined
01 = Level 1 (Lowest Priority) to 11 = Level 11 (Highest Priority)
12 = Pre-Emptive to 15 = Pre-Emptive 4 Emergency

Default Value: 00 (Not Defined)

Set/Query Format: NR1

Example: :CONFigure:CTYPe:USER:PRIority 10
Sets User Call Priority setting to 10.

Query Response: :CONFigure:CTYPe:USER:PRIority?
10

5.10.7 User Call - Signaling Type

:CONFigure:CTYPe:USER:STYPe
:CONFigure:CTYPe:USER:STYPe?

Description: Set command defines User Call Signaling Type.
Query command returns parameter setting.

Parameter: DIRect (Direct Setup) | HOOK (Hook Signaling)

Default Value: Hook Signaling

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:USER:STYPe Direct
Sets User Call to use Direct Setup.

Query Response: :CONFigure:CTYPe:USER:STYPe?
DIR

5.11 MESSAGES CONFIGURATION - HEX MESSAGE

5.11.1 Hex Message - Calling Party ESN

:CONFigure:MESSage:HEX:ESN:NUMBer
:CONFigure:MESSage:HEX:ESN:NUMBer?

Description: Set command defines ESN to be included in SDS Type 4 - HEX Message Type.
Query command returns parameter setting.

Parameter: phone number string, 24 character maximum

Default Value: 01438742200

Set/Query Format: number string

Example: :CONFigure:MESSage:HEX:ESN:NUMBer 0123456789
Sets Phone Call Calling Party ESN to 0123456789.

Query Response: :CONFigure:MESSage:HEX:ESN:NUMBer?
0123456789

5.11.2 Hex Message - Call Participant

:CONFigure:MESSage:HEX:GI
:CONFigure:MESSage:HEX:GI?

Description: Set command defines Hex Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:HEX:GI GROup
Sets Hex Message to Group call.

Query Response: :CONFigure:CTYPe:HEX:GI?
GRO

5.11.3 Hex Message - Calling Party SSI

:CONFigure:MESSage:HEX:SSI
:CONFigure:MESSage:HEX:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 - HEX Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:HEX:SSI 123456
Sets Calling Party SSI for Hex Message to 123456.

Query Response: :CONFigure:MESSage:HEX:SSI?
123456

5.11.4 Hex Message - ESN Mode

:CONFigure:MESSage:HEX:ESN:INCLude
:CONFigure:MESSage:HEX:ESN:INCLude?

Description: Set command defines Calling Party ESN mode of operation for SDS Type 4 - HEX Message.
Query command returns parameter setting.

Parameter: NINCluded (Not Included) | INCLuded (Included)

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:HEX:ESN:INCLude INCLuded
Sets Phone Call Calling Party ESN to be included.

Query Response: :CONFigure:MESSage:HEX:ESN:INCLude?
INCL

5.11.5 Hex Message - Initialize Message Length

:CONFigure:MESSage:HEX:INITialize

Description: Set command initializes SDS Type 4 - HEX Message Type to selected length message.

Parameter: LONG | MEDium | SHORt

Default Long: 82020101 Hex followed by "This SDS type 4 message in hex, was sent by the Test Set and is one hundred and twenty characters long and ends here”

Default Medium: 82020101 Hex followed by "A medium length 67 hex character message sent from the Test Set"

Default Short: 82020101 Hex followed by "A short hex message"

Set Format: CPD

Example: :CONFigure:MESSage:HEX:INITialize SHORt
Sends pre-defined short message.

5.11.6 Hex Message - Message Data

:CONFigure:MESSage:HEX:DATA
:CONFigure:MESSage:HEX:DATA?

Description: Set command defines SDS Type 4 - HEX Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: 82020101 Hex followed by "This SDS type 4 message in hex, was sent by the Test Set and is one hundred and twenty characters long and ends here”

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:HEX:DATA
“546869732069732061207465737420 6D6573736167652E”
Defines message content as “This is a test message”.

Query Response: :CONFigure:MESSage:HEX:DATA?
“546869732069732061207465737420 6D6573736167652E”

5.12 MESSAGES CONFIGURATION - OTHER MESSAGE

5.12.1 SDS Type 4 Other Message - Call Participant

:CONFigure:MESSage:OTHer:GI
:CONFigure:MESSage:OTHer:GI?

Description: Set command defines SDS Type 4 Other Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:OTHer:GI GROup
Sets SDS Type 4 Other Message to Group call.

Query Response: :CONFigure:CTYPe:OTHer:GI?
GRO

5.12.2 SDS Type 4 Other Message - Calling Party ESN

:CONFigure:MESSage:OTHer:ESN:NUMBer
:CONFigure:MESSage:OTHer:ESN:NUMBer?

Description: Set command defines ESN to be included in SDS Type 4 Other Message Type.
Query command returns parameter setting.

Parameter: phone number string, 24 character maximum

Default Value: 01438742200

Set/Query Format: number string

Example: :CONFigure:MESSage:OTHer:ESN:NUMBer 0123456789
Sets Phone Call Calling Party ESN to 0123456789.

Query Response: :CONFigure:MESSage:OTHer:ESN:NUMBer?
0123456789

5.12.3 SDS Type 4 Other Message - Calling Party SSI

:CONFigure:MESSage:OTHer:SSI
:CONFigure:MESSage:OTHer:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 Other Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:OTHer:SSI 123456
Sets Calling Party SSI for SDS Type 4 Other Message to 123456.

Query Response: :CONFigure:MESSage:OTHer:SSI?
123456

5.12.4 SDS Type 4 Other Message - ESN Mode

:CONFigure:MESSage:OTHer:ESN:INCLude
:CONFigure:MESSage:OTHer:ESN:INCLude?

Description: Set command defines Calling Party ESN mode of operation for SDS Type 4 Other Message.
Query command returns parameter setting.

Parameter: NINCluded (Not Included) | INCLuded (Included)

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:OTHer:ESN:INCLude INCLuded
Sets Phone Call Calling Party ESN to be included.

Query Response: :CONFigure:MESSage:OTHer:ESN:INCLude?
INCL

5.12.5 SDS Type 4 Other Message - Initialize Message Length

:CONFigure:MESSage:OTHer:INITialize

Description: Command initializes SDS Type 4 Other Message Type to selected length message.

Parameter: LONG | MEDium | SHORt

Default Long: 01 Hex followed by "This SDS type 4 other message in hex was sent by the Test Set and is one hundred and twenty characters long ending here"

Default Medium: 01 Hex followed by "A medium length SDS4 66 character message sent from the Test Set"

Default Short: 01 Hex followed by "A short SDS4 message"

Set Format: CPD

Example: :CONFigure:MESSage:OTHer:INITialize SHORt
Sends pre-defined short message.

5.12.6 SDS Type 4 Other Message - Message Data

:CONFigure:MESSage:OTHer:DATA
:CONFigure:MESSage:OTHer:DATA?

Description: Set command defines SDS Type 4 Other Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: 01 Hex followed by "This SDS type 4 other message in hex was sent by the Test Set and is one hundred and twenty characters long ending here"

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:OTHer:DATA
“546869732069732061207465737420 6D6573736167652E”
Defines message content as “This is a test message”.

Query Response: :CONFigure:MESSage:OTHer:DATA?
“546869732069732061207465737420 6D6573736167652E”

5.12.7 SDS Type 4 Other Message - Protocol Identifier

:CONFigure:MESSage:OTHer:PIDentifier
:CONFigure:MESSage:OTHer:PIDentifier?

Description: Set command defines Protocol Identifier.
Query command returns defined Protocol Identifier.
Range: 130 to 254
Default Value: 130
Set/Query Format: NR1
Example: :CONFigure:MESSage:OTHer:PIDentifier 200
Defines Protocol Identifier as 200.
Query Response: :CONFigure:MESSage:OTHer:PIDentifier?
200

5.12.8 SDS Type 4 Other Message - Report Size

:CONFigure:MESSage:OTHer:RSIZe
:CONFigure:MESSage:OTHer:RSIZe?

Description: Set command defines Report Size.
Query command returns parameter setting.
Parameter: SHORt | STANdard
Default Value: Standard
Set/Query Format: CPD | CRD
Example: :CONFigure:MESSage:OTHer:RSIZe STANDARD
Sets Report Size for Other message type to Standard.
Query Response: :CONFigure:MESSage:OTHer:RSIZe?
STAN

5.12.9

5.12.10 SDS Type 4 Other Message - Report Type

:CONFigure:MESSage:OTHer:RTYPe
:CONFigure:MESSage:OTHer:RTYPe?

Description: Set command defines Report Type.
Query command returns parameter setting.
Parameter: NONe | RECeived | CONSumed | BOTH
Default Value: Received
Set/Query Format: CPD | CRD
Example: :CONFigure:MESSage:OTHer:RTYPe NONE
Sets Report Type for Other message type to None: no report is generated.
Query Response: :CONFigure:MESSage:OTHer:RTYPe?
NONE

5.13 MESSAGES CONFIGURATION - SDS TYPE 1, 2 & 3 MESSAGE

5.13.1 SDS Type 1, 2 & 3 Message - Call Participant

:CONFigure:MESSage:SDS123:GI
:CONFigure:MESSage:SDS123:GI?

Description: Set command defines Type 1, 2 & 3 Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:SDS123:GI GROup
Sets Type 1, 2 & 3 Message to Group call.

Query Response: :CONFigure:CTYPe:SDS123:GI?
GRO

5.13.2 SDS Type 1, 2 & 3 Message - Calling Party ESN

:CONFigure:MESSage:SDS123:ESN:NUMBer
:CONFigure:MESSage:SDS123:ESN:NUMBer?

Description: Set command defines ESN to be included in SDS Type 1, 2 & 3 Message Type.
Query command returns parameter setting.

Parameter: phone number string, 24 character maximum

Default Value: 01438742200

Set/Query Format: number string

Example: :CONFigure:MESSage:SDS123:ESN:NUMBer 0123456789
Sets Phone Call Calling Party ESN to 0123456789.

Query Response: :CONFigure:MESSage:SDS123:ESN:NUMBer?
0123456789

5.13.3 SDS Type 1, 2 & 3 Message - Calling Party SSI

:CONFigure:MESSage:SDS123:SSI
:CONFigure:MESSage:SDS123:SSI?

Description: Set command defines Calling Party SSI for SDS Type 1, 2 & 3 Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:SDS123:SSI 123456
Sets Calling Party SSI for Type 1, 2 & 3 Message to 123456.

Query Response: :CONFigure:MESSage:SDS123:SSI?
123456

5.13.4 SDS Type 1, 2 & 3 Message - Message Data 1

:CONFigure:MESSage:SDS123:DATA1
:CONFigure:MESSage:SDS123:DATA1?

Description: Set command defines SDS Type 1, 2 & 3 data for Message 1.
Query command returns parameter setting.

Parameter: hex-string, 2 char pairs max

Range: 0 to FFFF

Default Value: 5431 (T1)

Set/Query Format: hex string

Example: :CONFigure:MESSage:SDS123:DATA1 “4849”
Sets SDS Type 1, 2 & 3 Message Data 1 to “Hi”.

Query Response: :CONFigure:MESSage:SDS123:DATA1?
4849

5.13.5 SDS Type 1, 2 & 3 Message - Message Data 2

:CONFigure:MESSage:SDS123:DATA2
:CONFigure:MESSage:SDS123:DATA2?

Description: Set command defines SDS Type 1, 2 & 3 data for Message 2.
Query command returns parameter setting.

Parameter: hex-string, 4 char pairs max

Range: 0 to FFFFFFFF

Default Value: 54595032 (TYP2)

Set/Query Format: hex string

Example: :CONFigure:MESSage:SDS123:DATA2 “54657374”
Sets SDS Type 1, 2 & 3 Message Data 2 to “Test”.

Query Response: :CONFigure:MESSage:SDS123:DATA2?
54657374

5.13.6 SDS Type 1, 2 & 3 Message - Message Data 3

:CONFigure:MESSage:SDS123:DATA3
:CONFigure:MESSage:SDS123:DATA3?

Description: Set command defines SDS Type 1, 2 & 3 data for Message 3.
Query command returns parameter setting.

Parameter: hex-string, 8 char pairs max

Range: 0 to FFFFFFFFFFFFFFFF

Default Value: 5459504533534453 (TYPE3SDS)

Set/Query Format: hex string

Example: :CONFigure:MESSage:SDS123:DATA3 “476F6F64627965”
Sets SDS Type 1, 2 & 3 Message Data 3 to “Goodbye”.

Query Response: :CONFigure:MESSage:SDS123:DATA3?
476F6F64627965

5.13.7 SDS Type 1, 2 & 3 Message - ESN Mode

:CONFigure:MESSage:SDS123:ESN:INCLude
:CONFigure:MESSage:SDS123:ESN:INCLude?

Description: Set command defines Calling Party ESN mode of operation for SDS Type 1, 2 & 3 Message.
Query command returns parameter setting.

Parameter: NINCluded (Not Included) | INCLuded (Included)

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:SDS123:ESN:INCLude INCLuded
Sets Phone Call Calling Party ESN to be included.

Query Response: :CONFigure:MESSage:SDS123:ESN:INCLude?
INCL

5.14 MESSAGES CONFIGURATION - SIMPLE TEXT MESSAGE

5.14.1 SDS Type 4 Simple Text Message - Call Participant

:CONFigure:MESSage:SIMPle:GI
:CONFigure:MESSage:SIMPle:GI?

Description: Set command defines SDS Type 4 Simple Text Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:SIMPle:GI GROup
Sets SDS Type 4 Simple Text Message to Group call.

Query Response: :CONFigure:CTYPe:SIMPle:GI?
GRO

5.14.2 SDS Type 4 Simple Text Message - Calling Party ESN

:CONFigure:MESSage:SIMPle:ESN:NUMBer
:CONFigure:MESSage:SIMPle:ESN:NUMBer?

Description: Set command defines ESN to be included in SDS Type 4 Simple Text Message Type.
Query command returns parameter setting.

Parameter: phone number string, 24 character maximum

Default Value: 01438742200

Set/Query Format: number string

Example: :CONFigure:MESSage:SIMPle:ESN:NUMBer 0123456789
Sets Phone Call Calling Party ESN to 0123456789.

Query Response: :CONFigure:MESSage:SIMPle:ESN:NUMBer?
0123456789

5.14.3 SDS Type 4 Simple Text Message - Calling Party SSI

:CONFigure:MESSage:SIMPle:SSI
:CONFigure:MESSage:SIMPle:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 Simple Text Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:SIMPle:SSI 123456
Sets Calling Party SSI for Type 4 Simple Text message to 123456.

Query Response: :CONFigure:MESSage:SIMPle:SSI?
123456

5.14.4 SDS Type 4 Simple Text Message - ESN Mode

:CONFigure:MESSage:SIMPle:ESN:INCLude
:CONFigure:MESSage:SIMPle:ESN:INCLude?

Description: Set command defines Calling Party ESN mode of operation for SDS Type 4 Simple Text Message.
Query command returns parameter setting.

Parameter: NINCluded (Not Included) | INCLuded (Included)

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:SIMPle:ESN:INCLude INCLuded
Sets Phone Call Calling Party ESN to be included.

Query Response: :CONFigure:MESSage:SIMPle:ESN:INCLude?
INCL

5.14.5 SDS Type 4 Simple Text Message - Initialize Message Length

:CONFigure:MESSage:SIMPle:INITialize p

Description: Command Initializes SDS Type 4 Simple Text Message to selected length message.

Parameter: LONG | MEDium | SHORt

Default Long: "This SDS type 4 simple text message was sent by the Test Set and is one hundred and twenty characters long and ends here"

Medium Default: "A medium length simple 66 character message sent from the Test Set"

Short Default: “A short simple message"

Example: :CONFigure:MESSage:SIMPle:INITialize MEDIUM
Initializes Medium length Simple Text message.

5.14.6 SDS Type 4 Simple Text Message - Message Data

:CONFigure:MESSage:SIMPle:DATA
:CONFigure:MESSage:SIMPle:DATA?

Description: Set command defines SDS Type 4 Simple Text Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: "This SDS type 4 simple text message was sent by the Test Set and is one hundred and twenty characters long and ends here"

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:SIMPle:DATA “This is a test message”
Defines message content as “This is a test message”.

Query Response: :CONFigure:MESSage:SIMPle:DATA?
“This is a test message”

5.14.7 SDS Type 4 Simple Text Message - Text Coding

:CONFigure:MESSage:SIMPle:TCODing
:CONFigure:MESSage:SIMPle:TCODing?

Description: Set command defines type of Text Coding used in SDS Type 4 Simple Text Message.
Query command returns parameter setting.

Parameter: GSM7 | ISO1

Default Value: IS01

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:SIMPle:TCODing GSM07
Sets Text Coding used in SDS Type 4 Simple Text Message to GSM07.

Query Response: :CONFigure:MESSage:SIMPle:TCODing?
GSM07

NOTE
GSM7 = 7 Bit GMS
ISO1 = ISO 1 Latin1 (8 bit)

5.15 MESSAGES CONFIGURATION - STATUS MESSAGE

5.15.1 Status Message - Call Participant

:CONFigure:MESSage:STATus:GI
:CONFigure:MESSage:STATus:GI?

Description: Set command defines Hex Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:STATus:GI GROup
Sets Hex Message to Group call.

Query Response: :CONFigure:CTYPe:STATus:GI?
GRO

5.15.2 Status Message - Calling Party ESN

:CONFigure:MESSage:STATus:ESN:NUMBer
:CONFigure:MESSage:STATus:ESN:NUMBer?

Description: Set command defines ESN to be included in Status Message.
Query command returns parameter setting.

Range: phone number string, 24 character maximum

Default Value: 742200 (Test Set)

Set/Query Format: phone number string

Example: :CONFigure:MESSage:STATus:ESN:NUMBer 0123456789
Sets Status Message Calling Party ESN to 0123456789.

Query Response: :CONFigure:MESSage:STATus:ESN:NUMBer?
0123456789

5.15.3 Status Message - Calling Party SSI

:CONFigure:MESSage:STATus:SSI
:CONFigure:MESSage:STATus:SSI?

Description: Set command defines Calling Party SSI for Status Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:STATus:SSI 123456
Sets Calling Party SSI for Hex Message to 123456.

Query Response: :CONFigure:MESSage:STATus:SSI?
123456

5.15.4 Status Message - ESN Mode

:CONFigure:MESSage:STATus:ESN:INCLude
:CONFigure:MESSage:STATus:ESN:INCLude?

Description: Set command defines Calling Party ESN mode of operation for Status Message.
Query command returns parameter setting.

Parameter: NINCluded (Not Included) | INCLuded (Included)

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:STATus:ESN:INCLude INCLuded
Sets Status Message Calling Party ESN to be included.

Query Response: :CONFigure:MESSage:STATus:ESN:INCLude?
INCL

5.15.5 Status Message - Message Data

:CONFigure:MESSage:STATus:DATA
:CONFigure:MESSage:STATus:DATA?

Description: Set command defines Status Message content.
Query command returns parameter setting.

Parameter: 0 to 65535

0 = Emergency	65273 = Scanning On
65024 = General Status Acknowledgement	65274 = Entry Request
65265 = Tx Inhibit On	65276 = Urgent Callback
65265 = Tx Inhibit Off	65277 = Selective Alert
65272 = Scanning Off	65279 = Callback Request

Default Value: 65279 (FEFF Hex Callback Request)

Set/Query Format: decimal

Example: :CONFigure:MESSage:STATus:DATA 65265
Sets Status Message to 65265 (Tx Inhibit Off).

Query Response: :CONFigure:MESSage:STATus:DATA?
65265

5.16 MESSAGES CONFIGURATION - TL TEXT MESSAGE

5.16.1 SDS Type 4 TL-Text Message - Call Participant

:CONFigure:MESSage:TLText:GI
:CONFigure:MESSage:TLText:GI?

Description: Set command defines SDS Type 4 TL-Text Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:TLText:GI GROup
Sets SDS Type 4 TL-Text Message to Group call.

Query Response: :CONFigure:CTYPe:TLText:GI?
GRO

5.16.2 SDS Type 4 TL-Text Message - ESN Number

:CONFigure:MESSage:TLText:ESN:NUMBer
:CONFigure:MESSage:TLText:ESN:NUMBer?

Description: Set command defines ESN to be included in SDS Type 4 TL-Text Message Type.
Query command returns parameter setting.

Parameter: phone number string, 24 character maximum

Default Value: 01438742200

Set/Query Format: number string

Example: :CONFigure:MESSage:TLText:ESN:NUMBer 0123456789
Sets Phone Call Calling Party ESN to 0123456789.

Query Response: :CONFigure:MESSage:TLText:ESN:NUMBer?
0123456789

5.16.3 SDS Type 4 TL-Text Message - Calling Party SSI

:CONFigure:MESSage:TLText:SSI
:CONFigure:MESSage:TLText:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 TL-Text Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:TLText:SSI 123456
Sets Calling Party SSI for SDS Type 4 TL-Text Message to 123456.

Query Response: :CONFigure:MESSage:TLText:SSI?
123456

5.16.4 SDS Type 4 TL-Text Message - ESN Mode

:CONFigure:MESSage:TLText:ESN:INCLude
:CONFigure:MESSage:TLText:ESN:INCLude?

Description: Set command defines Calling Party ESN mode of operation for SDS Type 4 TL-Text Message.
Query command returns parameter setting.

Parameter: NINCluded (Not Included) | INCLuded (Included)

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:ESN:INCLude INCLuded
Sets Phone Call Calling Party ESN to be included.

Query Response: :CONFigure:MESSage:TLText:ESN:INCLude?
INCL

5.16.5 SDS Type 4 TL-Text Message - Message Data

:CONFigure:MESSage:TLText:DATA
:CONFigure:MESSage:TLText:DATA?

Description: Set command defines SDS Type 4 TL-Text Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: 82020101 Hex followed by "This SDS type 4 message in hex, was sent by the Test Set and is one hundred and twenty characters long and ends here”

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:TLText:DATA “This is a test message”
Defines message content as “This is a test message”.

Query Response: :CONFigure:MESSage:TLText:DATA?
“This is a test message”

5.16.6 SDS Type 4 TL-Text Message - Initialize Message Length

:CONFigure:MESSage:TLText:INITialize

Description: Set command initializes SDS Type 4 TL-Text Message Type to selected length message.

Parameter: LONG | MEDium | SHORt

Default Long: 82020101 Hex followed by "This SDS type 4 message in hex, was sent by the Test Set and is one hundred and twenty characters long and ends here”

Default Medium: 82020101 Hex followed by "A medium length 67 hex character message sent from the Test Set"

Default Short: 82020101 Hex followed by "A short hex message"

Set Format: CPD

Example: :CONFigure:MESSage:TLText:INITialize SHORt
Sends pre-defined short message.

5.16.7 SDS Type 4 TL-Text Message - Report Size

:CONFigure:MESSage:TLText:RSIZe
:CONFigure:MESSage:TLText:RSIZe?

Description: Set command defines Report Size.
Query command returns parameter setting.

Parameter: SHORt | STANdard

Default Value: Standard

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:RSIZe STANDARD
Sets report size for Other message type to Standard.

Query Response: :CONFigure:MESSage:TLText:RSIZe?
STAN

5.16.8 SDS Type 4 TL-Text Message - Report Type

:CONFigure:MESSage:TLText:RTYPe
:CONFigure:MESSage:TLText:RTYPe?

Description: Set command defines Report Type.
Query command returns parameter setting.

Parameter: NONe | RECeived | CONSumed | BOTH

Default Value: Received

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:RTYPe NONE
Sets report type for Other message type to None: no report is generated.

Query Response: :CONFigure:MESSage:TLText:RTYPe?
NONE

5.16.9 SDS Type 4 TL-Text Message - Text Coding

:CONFigure:MESSage:TLText:TCODing
:CONFigure:MESSage:TLText:TCODing?

Description: Set command defines type of Text Coding used in SDS Type 4 TL Text Message.
Query command returns parameter setting.

Parameter: GSM7 | ISO1

Default Value: ISO1

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:TCODing GSM07
Sets Text Coding used in SDS Type 4 TL Text Message to GSM07.

Query Response: :CONFigure:MESSage:TLText:TCODing?
GSM07

NOTE
GSM7 = 7 Bit GMS
ISO1 = ISO 1 Latin1 (8 bit)

5.16.10 SDS Type 4 TL-Text Message - Time Stamp

:CONFigure:MESSage:TLText:TSTamp
:CONFigure:MESSage:TLText:TSTamp?

Description: Set command defines type of Text Coding used in SDS Type 4 TL Text Message.
Query command returns parameter setting.

Parameter: NINCluded | INCLuded

Default Value: Included

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:TSTamp
Includes Time Stamp in SDS Type 4 TL Text Message.

Query Response: :CONFigure:MESSage:TLText:TSTamp?
INCL

5.17 MOBILE PARAMETERS CONFIGURATION

5.17.1 Mobile Parameters - Energy Economy Mode Fixed Value

:CONFigure:MPARameter:EEMode:FIXed
:CONFigure:MPARameter:EEMode:FIXed?

Description: Set command defines Mobile Energy Economy Mode Fixed Value.
Query command returns statusbyte.

Parameter: 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7

Query Data: <statusbyte> (NR1)

where: 0 = Stay Alive
1 to 7 = Mode

Default Value: 0

Set/Query Format: NR1

Example: :CONFigure:MPARameter:EEMode:FIXed 5
Sets Mobile Energy Economy Mode Fixed Value to 5.

Query Response: :CONFigure:MPARameter:EEMode:FIXed?
5

NOTE
Command is only valid when Energy Economy Mode Option is installed in Test Set.
Energy Economy Mode bust be set to FIXED for command to be valid (:CONFigure:MPARameter:EEMode:USAGe FIXED).

5.17.2 Mobile Parameters - Energy Economy Mode of Operation

:CONFigure:MPARameter:EEMode:USAGe
:CONFigure:MPARameter:EEMode:USAGe?

Description: Set command defines Fixed or Reported Energy Economy Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:EEMode:USAGe FIXED
Sets Energy Economy Mode to use a fixed value.

Query Response: :CONFigure:MPARameter:EEMode:USAGe?
FIX

NOTE
Command is only valid when Energy Economy Mode Option is installed in Test Set.
EE Mode Fixed value is defined using :CONFigure:MPARameter:EEMode:FIXed command.

5.17.3 Mobile Parameters - Energy Economy Mode Reported Value

:CONFigure:MPARameter:EEMode:REPorted?

Description: Command returns Reported Energy Economy Mode value.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

eemode value (NR1): 0 = Stay Alive
1 to 7 = Energy Economy Mode
Empty/negative = Invalid

Query Response: :CONFigure:MPARameter:EEMode:REPorted?
0,-1

NOTE Command is only valid when Energy Economy Mode Option is installed in Test Set.
Energy Economy Mode bust be set to REPORTED for command to be valid (:CONFigure:MPARameter:EEMode:USAGe REPORTED).

5.17.4 Mobile Parameters - GSSI Fixed Value

:CONFigure:MPARameter:GSSI:FIXed
:CONFigure:MPARameter:GSSI:FIXed?

Description: Set command defines Mobile GSSI Fixed Value.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:MPARameter:GSSI:FIXed 5
Sets Mobile GSSI Fixed Value to 5.

Query Response: :CONFigure:MPARameter:GSSI:FIXed?
5

NOTE Mobile GSSI mode must be set to FIXED before sending command (:CONFigure:MPARameter:GSSI:USAGe FIXED).

5.17.5 Mobile Parameters - GSSI Mode of Operation

:CONFigure:MPARameter:GSSI:USAGe
:CONFigure:MPARameter:GSSI:USAGe?

Description: Set command defines Fixed or Reported GSSI Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:GSSI:USAGe FIXED
Sets GSSI Mode to use a fixed value.

Query Response: :CONFigure:MPARameter:GSSI:USAGe?
FIX

NOTE Mobile GSSI Fixed value is defined using :CONFigure:MPARameter:GSSI:FIXed command.

5.17.6 Mobile Parameters - GSSI Reported Value

:CONFigure:MPARameter:GSSI:REPorted?

Description: Command returns Reported GSSI value.

Query Data: <statusbyte>

statusbyte (NR1): 0 = Valid
1 = Invalid

Query Response: :CONFigure:MPARameter:GSSI:REPorted?
0,-1

NOTE Mobile GSSI mode must be set to REPORTED before sending command (:CONFigure:MPARameter:GSSI:USAGe REPORTED).

5.17.7 Mobile Parameters - Power Class Fixed Value

:CONFigure:MPARameter:PCLass:FIXed
:CONFigure:MPARameter:PCLass:FIXed?

Description: Set command defines Mobile Power Class Fixed Value.
Query command returns parameter setting.

Parameter: PC1 | PC1L | PC2 | PC2L | PC3 | PC3L | PC4 | PC4L

where: PC1 = 45.0 dBm / 30.0 W
PC1L = 42.5 dBm / 20.0 W
PC2 = 40.0 dBm / 10.0 W
PC2L = 37.5 dBm / 5.0 W
PC3 = 35.0 dBm / 3.0 W
PC3L = 32.5 dBm / 2.0 W
PC4 = 30.0 dBm / 1.0 W
PC4L = 27.5 dBm / 500.0 mW

Default Value: PC4

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:PCLass:FIXed PC2L
Sets Mobile Power Class Fixed value to PC2L.

Query Response: :CONFigure:MPARameter:PCLass:FIXed?
PC2L

NOTE Mobile Power Class must be set to FIXED for command to be valid (:CONFigure:MPARameter:PCLass:USAGe FIXED).

5.17.8 Mobile Parameters - Power Class Mode of Operation

:CONFigure:MPARameter:PCLass:USAGe
:CONFigure:MPARameter:PCLass:USAGe?

Description: Set command defines Fixed or Reported Power Class Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:PCLass:USAGe FIXED
Sets Power Class to use a fixed value.

Query Response: :CONFigure:MPARameter:PCLass:USAGe?
FIX

NOTE Fixed Power Class value is defined with :CONF:MPAR:PCL:USAG command.

5.17.9 Mobile Parameters - Power Class Reported Value

:CONFigure:MPARameter:PCLass:REPorted?

Description: Command returns Reported Power Class value.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

pclass value (NR1): PC1 | PC1L | PC2 | PC2L | PC3 | PC3L | PC4 | PC4L
Empty - Invalid

Query Response: :CONFigure:MPARameter:PCLass:REPorted?
0,PC2

NOTE Mobile Power Class must be set to REPORTED before sending command (:CONFigure:MPARameter:PCLass:USAGe REPORTED).

5.17.10 Mobile Parameters - Receiver Class Fixed Value

:CONFigure:MPARameter:RCLass:FIXed
:CONFigure:MPARameter:RCLass:FIXed?

Description: Set command defines Mobile Receiver Class Fixed Value.
Query command returns parameter setting.

Parameter: A | B | E

Default Value: A

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:RCLass:FIXed B
Sets Mobile Receiver Class Fixed value to B.

Query Response: :CONFigure:MPARameter:RCLass:FIXed?
B

NOTE Mobile Receiver Class must be set to FIXED before sending command (:CONFigure:MPARameter:RCLass:USAGe FIXED).

5.17.11 Mobile Parameters - Receiver Class Mode of Operation

:CONFigure:MPARameter:RCLass:USAGe
:CONFigure:MPARameter:RCLass:USAGe?

Description: Set command defines Fixed or Reported Receiver Class Mode of operation is used.
Query command returns defined

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:RCLass:USAGe FIXED
Sets Receiver Class to use a fixed value.

Query Response: :CONFigure:MPARameter:RCLass:USAGe?
FIX

NOTE Fixed Receiver Class value is defined with :CONF:MPAR:RCL:USAG command.

5.17.12 Mobile Parameters - Receiver Class Reported Value

:CONFigure:MPARameter:RCLass:REPorted?

Description: Command returns Reported Receiver Class value.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

pclass value (NR1): A | B | E
Empty - Invalid

Query Response: :CONFigure:MPARameter:RCLass:REPorted?
0,B

NOTE Mobile Receiver Class must be set to REPORTED before sending command (:CONFigure:MPARameter:RCLass:USAGe REPORTED).

5.17.13 Mobile Parameters - SSI Fixed Value

:CONFigure:MPARameter:SSI:FIXed
:CONFigure:MPARameter:SSI:FIXed?

Description: Set command defines Mobile SSI Fixed Value.
Query command returns statubyte.

Range: 0 to 16777215

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:MPARameter:SSI:FIXed 250
Sets Mobile SSI Fixed value to 250.

Query Response: :CONFigure:MPARameter:SSI:FIXed?
250

NOTE Mobile SSI Mode must be set to FIXED before sending command (:CONFigure:MPARameter:SSI:USAGe FIXED).

5.17.14 Mobile Parameters - SSI Mode of Operation

:CONFigure:MPARameter:SSI:USAGe
:CONFigure:MPARameter:SSI:USAGe?

Description: Set command defines Fixed or Reported SSI Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:SSI:USAGe FIXED
Sets SSI to use a fixed value.

Query Response: :CONFigure:MPARameter:SSI:USAGe?
FIX

NOTE Fixed SSI value is defined with :CONF:MPAR:SSI:USAG command.

5.17.15 Mobile Parameters - SSI Reported Value

:CONFigure:MPARameter:SSI:REPorted?

Description: Command returns Reported SSI value.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

value (NR1): reported value
Empty/Negative value = Invalid

Query Response: :CONFigure:MPARameter:SSI:REPorted?
0,B

NOTE Mobile SSI Mode must be set to REPORTED before sending command (:CONFigure:MPARameter:SSI:USAGe REPORTED).

5.18 NEIGHBOR CELL CONFIGURATION

5.18.1 Neighbor Cell - Broadcast Channel

:CONFigure:NCELI:CHANnel
:CONFigure:NCELI:CHANnel?

Description: Set command defines Neighbor Cell Broadcast Channel.
Query command returns parameter setting.

Range: 0 to 4095

Default Value: 0

Set/Query Format: NR1

Example: :CONFigure:NCELI:CHANnel 500
Sets Neighbor Cell Broadcast Channel to 500.

Query Response: :CONFigure:NCELI:CHANnel?
500

5.18.2 Neighbor Cell - Broadcast Identifier

:CONFigure:NCELI:IDENtifier
:CONFigure:NCELI:IDENtifier?

Description: Set command defines Neighbor Cell Broadcast Identifier.
Query command returns parameter setting.

Range: 1 to 31

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:NCELI:IDENtifier 25
Sets Neighbor Cell Broadcast Identifier to 25.

Query Response: :CONFigure:NCELI:IDENtifier?
25

5.18.3 Neighbor Cell - Broadcast Interval

:CONFigure:NCELI:BINTerval
:CONFigure:NCELI:BINTerval?

Description: Set command defines Neighbor Cell Broadcast interval.
Query command returns parameter setting.

Range: 4 to 30 seconds

Units: seconds

Default Value: 10 seconds

Set/Query Format: NR1

Example: :CONFigure:NCELI:BINTerval 5
Sets Neighbor Cell Broadcast Interval to 5 seconds.

Query Response: :CONFigure:NCELI:BINTerval?
5

5.18.4 Neighbor Cell - Broadcast Location Area

:CONFigure:NCELI:LA
:CONFigure:NCELI:LA?

Description: Set command defines Neighbor Cell Broadcast Location Area.
Query command returns parameter setting.

Range: 0 to 16383

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:NCELI:LA 575
Sets Neighbor Cell Broadcast Location Area to 575.

Query Response: :CONFigure:NCELI:LA?
575

5.18.5 Neighbor Cell - Broadcast Support

:CONFigure:NCELI:BCAST
:CONFigure:NCELI:BCAST?

Description: Set command indicates whether or not Neighbor Cell Broadcast is supported.
Query command returns parameter setting.

Parameter: NSUPported | SUPPorted

Default Value: Not Supported

Set/Query Format: CPD | CRD

Example: :CONFigure:NCELI:BCAST NSUPPORTED
Indicates Neighbor Cell Broadbast is not supported.

Query Response: :CONFigure:NCELI:BCAST?
NSUP

5.18.6 Neighbor Cell - Fast Re-Select Hysteresis

:CONFigure:NCELI:RESelect:FHYSteresis
:CONFigure:NCELI:RESelect:FHYSteresis?

Description: Set command defines Fast Re-Select Hysteresis value.
Query command returns parameter setting.
Range: 0.0 to 30.0 dB, 2 dB steps
Units: dB
Default Value: 6.0 dB
Set/Query Format: NR1
Example: :CONFigure:NCELI:RESelect:FHYSteresis 15dB
Sets Fast Re-Select Hysteresis value to 15.0 dB.
Query Response: :CONFigure:NCELI:RESelect:FHYSteresis?
15

5.18.7 Neighbor Cell - Fast Re-Select Threshold

:CONFigure:NCELI:RESelect:FTHReshold
:CONFigure:NCELI:RESelect:FTHReshold?

Description: Set command defines Fast Re-Select Threshold value.
Query command returns parameter setting.
Range: 0.0 to 30.0 dB, 2 dB steps
Units: dB
Default Value: 18.0 dB
Set/Query Format: NR1
Example: :CONFigure:NCELI:RESelect:FTHReshold 15dB
Sets Fast Re-Select Hysteresis value to 15.0 dB.
Query Response: :CONFigure:NCELI:RESelect:FTHReshold?
15

5.18.8 Neighbor Cell - Slow Re-Select Hysteresis

:CONFigure:NCELI:RESelect:SHYSteresis
:CONFigure:NCELI:RESelect:SHYSteresis?

Description: Set command defines Slow Re-Select Hysteresis value.
Query command returns parameter setting.
Range: 0.0 to 30.0 dB, 2 dB steps
Units: dB
Default Value: 6.0 dB
Set/Query Format: NR1
Example: :CONFigure:NCELI:RESelect:SHYSteresis 15dB
Sets Slow Re-Select Hysteresis value to 15.0 dB.
Query Response: :CONFigure:NCELI:RESelect:SHYSteresis?
15

5.18.9 Neighbor Cell - Slow Re-Select Threshold

:CONFigure:NCELI:RESelect:STHReshold
:CONFigure:NCELI:RESelect:STHReshold?

Description: Set command defines Slow Re-Select Threshold value.
Query command returns parameter setting.

Range: 0.0 to 30.0 dB, 2 dB steps

Units: dB

Default Value: 24.0 dB

Set/Query Format: NR1

Example: :CONFigure:NCELI:RESelect:STHReshold 15dB
Sets Slow Re-Select Hysteresis value to 15.0 dB.

Query Response: :CONFigure:NCELI:RESelect:STHReshold?
15

5.19 OFFSETS CONFIGURATION

5.19.1 RF Analyzer - Offset Enable

:CONFigure:OFFSet:ANALyzer:ENABle
:CONFigure:OFFSet:ANALyzer:ENABle?

Description: Set command Enables/Disables the RF Analyzer Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:ANALyzer:ENABle ON
Enables RF Analyzer Offset.

Query Response: :CONFigure:OFFSet:ANALyzer:ENABle?
1

5.19.2 RF Analyzer - Offset Value

:CONFigure:OFFSet:ANALyzer:VALue
:CONFigure:OFFSet:ANALyzer:VALue?

Description: Set command defines the RF Analyzer Offset Value.
Query command returns parameter setting.

Range: -40.0 to +40.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:ANALyzer:VALue -10dB
Sets RF Analyzer Offset to -10.0 dB.

Query Response: :CONFigure:OFFSet:ANALyzer:VALue?
-10.0

5.19.3 RF Generator - Offset Enable

:CONFigure:OFFSet:GENerator:ENABle
:CONFigure:OFFSet:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:GENerator:ENABle ON
Enables RF Generator Offset.

Query Response: :CONFigure:OFFSet:GENerator:ENABle?
1

5.19.4 RF Generator - Offset Value

:CONFigure:OFFSet:GENerator:VALue
:CONFigure:OFFSet:GENerator:VALue?

Description: Set command defines RF Generator Offset Value.
Query command returns parameter setting.
Range: -40.0 to +40.0 dB
Units: dB
Default Value: 0.0 dB
Set/Query Format: NRf | NR2
Example: :CONFigure:OFFSet:GENerator:VALue 2.5dB
Set RF Generator Offset to 2.5 dB.
Query Response: :CONFigure:OFFSet:GENerator:VALue?
2.5

5.19.5 Timing - Offset Enable

:CONFigure:OFFSet:TIMing:ENABle
:CONFigure:OFFSet:TIMing:ENABle?

Description: Set command Enables/Disables the Timing Offset.
Query command returns parameter setting.
Parameter: OFF | ON | 0 | 1
Default Value: OFF
Set/Query Format: Boolean
Example: :CONFigure:OFFSet:TIMing:ENABle ON
Enables Timing Offset.
Query Response: :CONFigure:OFFSet:TIMing:ENABle?
1

5.19.6 Timing - Offset Value

:CONFigure:OFFSet:TIMing:VALue
:CONFigure:OFFSet:TIMing:VALue?

Description: Set command defines the Timing Offset Value.
Query command returns parameter setting.
Range: -999.99 to +999.99 symbols
Units: symbols
Default Value: 0.0 symbols
Set/Query Format: NRf | NR2
Example: :CONFigure:OFFSet:TIMing:VALue -150
Sets TIming Offset to -150.00.
Query Response: :CONFigure:OFFSet:TIMing:VALue?
-150

5.20 RX MEASUREMENTS LIMITS CONFIGURATION

5.20.1 Rx Measurements - Initialize Limits

:LIMits:RXMeas:INITialize

Description: Command Initializes Rx Measurement Limits as Normal or Extreme.

Parameter: STATic | DYNamic

Example: :LIMits:RXMeas:INITialize NORMAL
Initializes Rx Measurement Limits to Normal.

5.20.2 Rx Measurement - Limit Enable

:LIMits:RXMeas:xxx:ENABle
:LIMits:RXMeas:xxx:ENABle?

Description: Set command Enables/Disables Limit for specified Rx Measurement.
Query command returns parameter setting.

Measurement Type (xxx): BER0 | BER1 | BER2 | MER | PUEM | RBER0 | RBER1

Parameter: OFF | ON | 0 | 1

Default Values:

	Default	Static	Dynamic
BER0:	ON	ON	OFF
BER1:	ON	ON	OFF
BER2:	ON	ON	OFF
MER:	ON	ON	OFF
RBER0:	ON	ON	OFF
RBER1:	ON	ON	OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:BER0:ENABle ON
Enables Limits for BER0 Rx Measurements.

Query Response: :LIMits:RXMeas:BER0:ENABle?
1

5.20.3 Rx Measurements - Limit Value

:LIMits:RXMeas:xxx:VALue
:LIMits:RXMeas:xxx:VALue?

Description: Set command defines Limit Value for specified Rx Measurement.
Query command returns parameter setting.

Measurement Type (xxx): BER0 | BER1 | BER2 | MER | RBER0 | RBER1

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**	**Class E**
Default/Static:			
BER0:	4.27000%	4.88000%	4.27000%
BER1:	0.23000%	0.23000%	0.23000%
BER2:	0.23000%	0.23000%	0.23000%
RBER0:	4.27000%	4.88000%	4.27000%
RBER1:	0.23000%	0.23000%	0.23000%
MER:	0.04500%	0.04500%	0.04500%
Dynamic:			
BER0:	4.25600%	2.46400%	11.53600%
BER1:	1.90400%	1.79200%	10.52800%
BER2:	1.90400%	1.79200%	10.52800%
RBER0:	4.25600%	2.46400%	11.53600%
RBER1:	1.90400%	1.79200%	10.52800%
MER:	2.91200%	2.46400%	16.01600%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:BER0:VALue 5,6,7
Sets Limit Value for BER0 Class A Rx Measurement to 5%, Class B Rx Measurement to 6.0% and Class E Rx Measurements to 7%.

Query Response: :LIMits:RXMeas:BER0:VALue?
5.00000,6.00000,7.00000

5.21 SYSTEM ID & ACCESS PARAMETERS CONFIGURATION

5.21.1 System ID & Access - Access Parameter

:CONFigure:ACCess:APARameter
:CONFigure:ACCess:APARameter?

Description: Set command defines System Access Parameter.
Query command returns parameter setting.
Parameter: -53.0 to -25.0 dBm, 2 dB steps
Units: dBm
Default Value: -45.0 dBm
Set/Query Format: NRF | NR1
Example: :CONFigure:ACCess:APARameter -35dBm
Sets System Access Parameter to -35.0 dBm
Query Response: :CONFigure:ACCess:APARameter?
-35

5.21.2 System ID & Access - Maximum Tx Level

:CONFigure:ACCess:MAXTx
:CONFigure:ACCess:MAXTx?

Description: Set command defines System Maximum Tx Level.
Query command returns parameter setting.
Parameter: +15.0 to +45.0 dBm, 5 dB steps
Units: dBm
Default Value: +30.0 dBm
Set/Query Format: NRF | NR1
Example: :CONFigure:ACCess:MAXTx 20dBm
Sets System Maximum Tx Level to 20.0 dBm.
Query Response: :CONFigure:ACCess:MAXTx?
20

5.21.3 System ID & Access - Minimum Rx Level

:CONFigure:ACCess:MINRx
:CONFigure:ACCess:MINRx?

Description: Set command defines defines System Minimum Rx Level.
Query command returns parameter setting.
Parameter: -125.0 to -50.0 dBm, 5 dB steps
Units: dBm
Default Value: -125.0 dBm
Set/Query Format: NRF | NR1
Example: :CONFigure:ACCess:MAXTx -100dBm
Sets System Minimum Rx Level to -100.0 dBm.
Query Response: :CONFigure:ACCess:MAXTx?
-100

5.21.4 System ID & Access Parameters - Base Station Color Code

:CONFigure:BSIDentity:BCC
:CONFigure:BSIDentity:BCC?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.
Range: 0 to 63
Default Value: 1
Set/Query Format: NR1
Example: :CONFigure:BSIDentity:BCC 25
Sets Base Station Color Code to 25.
Query Response: :CONFigure:BSIDentity:BCC?
25

5.21.5 System ID & Access Parameters - Base Station Location Area

:CONFigure:BSIDentity:LA
:CONFigure:BSIDentity:LA?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.
Range: 0 to 16383
Default Value: 1
Set/Query Format: NR1
Example: :CONFigure:BSIDentity:LA 1750
Sets Base Station Location Area to 1750.
Query Response: :CONFigure:BSIDentity:LA?
1750

5.21.6 System ID & Access Parameters - Base Station Mobile Country Code

:CONFigure:BSIDentity:MCC
:CONFigure:BSIDentity:MCC?

Description: Set command defines Base Station Mobile Country Code.
Query command returns parameter setting.
Range: 0 to 999
Default Value: 1 (Test)
Set/Query Format: NR1
Example: :CONFigure:BSIDentity:MCC 234
Sets Base Station Mobile Country Code to 234 (United Kingdom).
Query Response: :CONFigure:BSIDentity:MCC?
234

5.21.7 System ID & Access Parameters - Base Station Mobile Network Code

:CONFigure:BSIDentity:MNC
:CONFigure:BSIDentity:MNC?

Description:	Set command defines Base Station Mobile Country Code. Query command returns parameter setting.
Range:	0 to 16383
Default Value:	1
Set/Query Format:	NR1
Example:	:CONFigure:BSIDentity:MNC 1234 Sets Base Station Mobile Network Code to 1234.
Query Response:	:CONFigure:BSIDentity:MNC? 1234

5.22 TX MEASUREMENTS LIMITS CONFIGURATION

5.22.1 Tx Measurements - Initialize Limits

:LIMits:TXMeas:INITialize:CONTrol
:LIMits:TXMeas:INITialize:NORMal

Description: Command Initializes Tx Measurement Limits as Normal or Extreme.

Parameter: NORMal | EXTReme

Example: :LIMits:TXMeas:INITialize:NORMAL EXTREME
Initializes Tx Measurement Limits to Extreme for Normal burst.

5.22.2 Tx Burst Power - Limit Enable

:LIMits:TXMeas:POWer:ENABle:xxx
:LIMits:TXMeas:POWer:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:POWer:ENABle:NORMal ON
Enables Limit for Normal burst Tx Burst Power Measurements.

Query Response: :LIMits:TXMeas:POWer:ENABle:NORMal?
1

5.22.3 Tx Burst Power - Limit Value

:LIMits:TXMeas:POWer:VALue:xxx
:LIMits:TXMeas:POWer:VALue:xxx?

Description: Set command defines Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Range: -9.9 to +9.9 dB

Units: dB

Default Values:

Default/Normal:

Highest Power Level Upper: +2.0 dB
Highest Power Level Lower: -2.0 dB
Other Power Level Upper: +2.5 dB
Other Power Level Lower: -2.5 dB

Extreme:

Highest Power Level Upper: +3.0 dB
Highest Power Level Lower: -4.0 dB
Other Power Level Upper: +4.0 dB
Other Power Level Lower: -4.0dB

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:POWer:VALue:NORMal 3,-3,5,-5
Sets Limit for Normal Tx Burst Power Measurements to the following:

Highest Power Level Upper: +3.0 dB
Highest Power Level Lower: -3.0 dB
Other Power Level Upper: +5.0 dB
Other Power Level Lower: -5.0 dB

Query Response: :LIMits:TXMeas:POWer:VALue:NORMal?
3.0,-3.0,5.0,-5.0

5.22.4 Tx Burst Timing - Limit Enable

:LIMits:TXMeas:BTIMing:ENABle:xxx
:LIMits:TXMeas:BTIMing:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Burst Timing Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:BTIMing:ENABle:NORMal ON
Enables Limit for Normal burst Tx Burst Timing Measurements.

Query Response: :LIMits:TXMeas:BTIMing:ENABle:NORMal?
1

5.22.5 Tx Burst Timing - Limit Value

:LIMits:TXMeas:BTIMing:VALue:xxx
:LIMits:TXMeas:BTIMing:VALue:xxx?

Description: Set command defines Limit for Tx Burst Timing Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.01 to 9.99 symbols

Units: symbols

Default Values:

Default/Normal: 0.25 symbols

Extreme: 0.25 symbols

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:BTIMing:VALue:NORMal 1
Sets Limit for Normal burst Tx Burst Timing Measurements to 1 symbol.

Query Response: :LIMits:TXMeas:BTIMing:VALue:NORMal?
1

5.22.6 Tx Frequency Error - Limit Enable

:LIMits:TXMeas:FERRor:ENABle:xxx
:LIMits:TXMeas:FERRor:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal | CW

Example: :LIMits:TXMeas:FERRor:ENABle:NORMal ON
Enables Limit for Normal burst Tx Frequency Error Measurements.

Query Response: :LIMits:TXMeas:FERRor:ENABle:NORMal?
1

5.22.7 Tx Frequency Error - Limit Value

:LIMits:TXMeas:FERRor:VALue:xxx
:LIMits:TXMeas:FERRor:VALue:xxx?

Description: Set command defines Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 1500.0 Hz

Units: Hz

Default Values:

Default/Normal: 100.0 Hz

Extreme: 100.0 Hz

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal | CW

Example: :LIMits:TXMeas:FERRor:VALue:NORMal 150Hz
Sets Limit for Normal burst Tx Frequency Error Measurements to 150.0 Hz.

Query Response: :LIMits:TXMeas:FERRor:VALue:NORMal?
150.0

5.22.8 Tx Profile Power - Limit Enable

:LIMits:TXMeas:PROFile:ENABle:xxx
:LIMits:TXMeas:PROFile:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Profile Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:PROFile:ENABle:NORMal ON
Enables Limit for Normal burst Tx Profile Power Measurements.

Query Response: :LIMits:TXMeas:PROFile:ENABle:NORMal?
1

5.22.9 Tx Power Profile - Limit Value

:LIMits:TXMeas:PROFile:VALue:xxx
:LIMits:TXMeas:PROFile:VALue:xxx?

Description: Set command defines Limit for Tx Power Profile Measurements for specified burst type.
Query command returns parameter setting.

Range:

Low dBc Leading/Trailing: 0.0 to +9.9 dBc
Low dBm Leading/Trailing: 0.0 to +9.9 dBc
High dBc Leading: -9.9 to +9.9 dBc
High dBc Trailing: -9.9 to +9.9 dBc

Units: dBc | dBm

Default Values: Default, Normal and Extreme

Low dBc Leading/Trailing: -70.0 dBc
Low dBm Leading/Trailing: -36.0 dBm
High dBc Leading: +6.0 dBc
High dBc Trailing: +3.0 dBm

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:PROFile:VALue:NORMal -50,-20,5,5
Sets Limits for Normal Tx Power Profile burst Measurements to the following:

Low dBc Leading/Trailing: -50.0 dBc
Low dBm Leading/Trailing: -20.0 dBm
High dBc Leading: +5.0 dBc
High dBc Trailing: +2.0 dBm

Query Response: :LIMits:TXMeas:PROFile:VALue:NORMal?
-50.0,-20.0,5.0,2.0

5.22.10 Tx Residual Carrier - Limit Enable

:LIMits:TXMeas:RCARRier:ENABle:xxx
:LIMits:TXMeas:RCARRier:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:RCARRier:ENABle:NORMal ON
Enables Limit for Normal burst Tx Residual Carrier Measurements.

Query Response: :LIMits:TXMeas:RCARRier:ENABle:NORMal?
1

5.22.11 Tx Residual Carrier - Limit Value

:LIMits:TXMeas:RCARrier:VALue:xxx
:LIMits:TXMeas:RCARrier:VALue:xxx?

Description: Set command defines Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 5.0%

Extreme: 5.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:RCARrier:VALue:NORMal 10.0
Sets Limit Value for Normal Tx Residual Carrier Burst Measurements to 10.0%.

Query Response: :LIMits:TXMeas:RCARrier:VALue:NORMal?
10.0

5.22.12 Tx Vector Peak - Limit Enable

:LIMits:TXMeas:VPEak:ENABle:xxx
:LIMits:TXMeas:VPEak:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VPEak:ENABle:NORMal ON
Enables Limit for Normal burst Tx Vector Peak Measurements.

Query Response: :LIMits:TXMeas:VPEak:ENABle:NORMal?
1

5.22.13 Tx Vector Peak - Limit Value

:LIMits:TXMeas:VPEak:VALue:xxx
:LIMits:TXMeas:VPEak:VALue:xxx?

Description: Set command defines Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 30.0%

Extreme: 30.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VPEak:VALue:NORMal 15.0
Sets Limit for Normal Tx Vector Peak Burst Measurements to 15.0%.

Query Response: :LIMits:TXMeas:VPEak:VALue:NORMal?
15.0

5.22.14 Tx Vector RMS - Limit Enable

:LIMits:TXMeas:VRMS:ENABle:xxx
:LIMits:TXMeas:VRMS:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector RMS Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VRMS:ENABle:NORMal ON
Enables Limit for Normal burst Tx Vector RMS Measurements.

Query Response: :LIMits:TXMeas:VRMS:ENABle:NORMal?
1

5.22.15 Tx Vector RMS - Limit Value

:LIMits:TXMeas:VRMS:VALue:xxx
:LIMits:TXMeas:VRMS:VALue:xxx?

Description: Set command defines Limit for Tx Vector RMS Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Value:

Default/Normal: 10.0%

Extreme: 10.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VRMS:VALue:NORMal 15.0
Sets Limit for Normal Tx Vector RMS Burst Measurements to 15.0%.

Query Response: :LIMits:TXMeas:VRMS:VALue:NORMal?
15.0

5.23 MODULATION ACCURACY - MAGNITUDE ERROR

5.23.1 Magnitude Error - Burst Data at Symbol Point

:FETCh:MACCuracy:MERRor:xxx? p

Description: Command returns Magnitude Error measurement for Control or Normal Bursts at symbol point.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: 0 to 103 (NR1)
Normal Burst symbol range: 0 to 231 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:MERRor:NORMal? 50
0,-4.60

NOTE Statusbyte may return more than one condition as a bitmask.

5.23.2 Magnitude Error - Symbol Range

:FETCh:MACCuracy:MERRor:RANGe:xxx?

Description: Command returns Magnitude Error Symbol Range for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:MERRor:RANGe:CONTrol?
0,-24,79

NOTE Statusbyte may return more than one condition as a bitmask.

5.24 MODULATION ACCURACY - PHASE ERROR

5.24.1 Phase Error - Burst Data at Symbol Point

:FETCh:MACCuracy:PERRor:xxx? p

Description: Command returns Phase Error measurement for Control or Normal Bursts at symbol point.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: 0 to 103 (NR1)
Normal Burst symbol range: 0 to 231 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): degree

Query Response: :FETCh:MACCuracy:PERRor:NORMal? 50
0,3.13

NOTE Statusbyte may return more than one condition as a bitmask.

5.24.2 Phase Error - Symbol Range

:FETCh:MACCuracy:PERRor:RANGe:CONTrol?
:FETCh:MACCuracy:PERRor:RANGe:NORMal?

Description: Command returns Phase Error Symbol Range Control or Normal Bursts.

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:PERRor:RANGe:CONTrol?
0,-24,79

NOTE Statusbyte may return more than one condition as a bitmask.

5.25 MODULATION ACCURACY - VECTOR ERROR

5.25.1 Vector Error - Burst Data at Symbol Point

:FETCh:MACCuracy:VERRor:xxx? p

Description: Command returns Vector Error measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: 0 to 103 (NR1)
Normal Burst symbol range: 0 to 231 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:VERRor:CONTrol? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

5.25.2 Vector Error - Symbol Range

:FETCh:MACCuracy:VERRor:RANGe:xxx?

Description: Command returns Vector Error Symbol Range for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:VERRor:RANGe:CONTrol?
0,-24,79

NOTE Statusbyte may return more than one condition as a bitmask.

5.26 OPERATIONS/STATUS TEST TILE

5.26.1 Message - Send Hex Message

:PROTocol:ACTion:MESSage:HEX

Description: Command sends Type 4 SDS Hex Message.

Parameter/Query: none

5.26.2 Message - Send SDS Other Message

:PROTocol:ACTion:MESSage:SDSTL:OTHer

Description: Command sends Other Type 4 SDS Message.

Parameter/Query: none

5.26.3 Message - Send SDS TL Text Message

:PROTocol:ACTion:MESSage:SDSTL:TLText

Description: Command sends SDS Text Message.

Parameter/Query: none

5.26.4 Message - Send Simple TL Text Message

:PROTocol:ACTion:MESSage:SIMPle:TLText

Description: Command sends Simple Text Message.

Parameter/Query: none

5.26.5 Message - Send Status Message

:PROTocol:ACTion:MESSage:STATus

Description: Command sends Status Message.

Parameter/Query: none

5.26.6 Message - Send Type 1 Message

:PROTocol:ACTion:MESSage:STYP1

Description: Command sends Type SDS Type 1 Message.

Parameter/Query: none

5.26.7 Message - Send Type 2 Message

:PROTocol:ACTion:MESSage:STYP2

Description: Command sends Type SDS Type 2 Message.

Parameter/Query: none

5.26.8 Message - Send Type 3 Message

:PROTocol:ACTion:MESSage:STYP3

Description: Command sends Type SDS Type 3 Message.

Parameter/Query: none

5.26.9 Protocol - Abort Call

:PROTocol:ACTion:CALL:ABORt

Description: Command aborts current call.

Parameter/Query: none

5.26.10 Protocol - Answer Call

:PROTocol:ACTion:ANSWer

Description: Command answers call.

Parameter/Query: none

5.26.11 Protocol - Call Information

:PROTocol:CINFo?

Description: Commands returns current Call Information.

Query Data: <statusbyte>,<source>,<addressing>,<duplexing>,<signal>,<priority>,<SSI>,<address extention>,<ESN>

statusbyte (NR1):	0 = Valid 1 = Invalid
source (ascii string):	MOBILE ORIGINATED | MOBILE TERMINATED
addressing (ascii string):	INDIVIDUAL | GROUP | GROUP ACK | BROADCAST
duplexing (ascii string):	SIMPLEX | DUPLEX
signaling (ascii string):	HOOK | DIRECT
priority response (NR1):	0 to 15
SSI (NR1):	0 to 16777215
address extension (ascii string):	ddd/ddddd where d = decimal character
ESN (phone number string):	numbers & # * + only no spaces, 24 char max invalid items are returned as empty strings

Query Response: :PROTocol:CINFo?
0,”MOBILE ORIGINATED”,”INDIVIDUAL”,”DUPLEX”,”HOOK”,0,16777184,””,””

5.26.12 Protocol - Call Loopback

:PROTocol:ACTion:LOOPback

Description: Command places defined type of Loopback Call.

Parameter: BER | RBER | END

Set Format: CPD

Example: :PROTocol:ACTion:LOOPback BER

5.26.13 Protocol - Cleardown Call

:PROTocol:ACTion:CDOWn

Description: Command clears down call.

Parameter/Query: none

5.26.14 Protocol - Commanded Registration

:PROTocol:ACTion:CREG

Description: Command requires Commanded Registration.
Parameter/Query: none

5.26.15 Protocol - DTMF Digits Received

:PROTocol:DTMF?

Description: Command returns DTMF digits received.
Query Data: previous dtmf characters, current dtmf character
0 - 9, *, #, A - D
Query Response: :PROTocol:DTMF?
“123456”,””

5.26.16 Protocol - Energy Economy Mode

:PROTocol:ACTion:EEMode

Description: Command sets Energy Economy Mode (**option enabled*).
Parameter: 0 = Stay Alive
1 to 7 = mode
Set Format: NR1
Example: :PROTocol:ACTion:EEMode 5
Sets Energy Economy Mode to Mode 5.
Query Response: no query

5.26.17 Protocol - Place Emergency Call

:PROTocol:ACTion:CALL:EMERgency

Description: Command places an Emergency Call.
Parameter/Query: none

5.26.18 Protocol - Place Group Call

:PROTocol:ACTion:CALL:GROup

Description: Command places a Group Call.
Parameter/Query: none

5.26.19 Protocol - Place Phone Call

:PROTocol:ACTion:CALL:PHONe

Description: Command places a Phone Call.
Parameter/Query: none

5.26.20 Protocol - Place Private Call

:PROTocol:ACTion:CALL:PRIVate

Description: Command places a Private Call.
Parameter/Query: none

5.26.21 Protocol - Place User Call

:PROTocol:ACTion:CALL:USER

Description: Command places a User Defined Call.
Parameter/Query: none

5.26.22 Protocol - Reject Call

:PROTocol:ACTion:REJect

Description: Command rejects current call.
Parameter/Query: none

5.26.23 Protocol - Reset Call to MCCH

:PROTocol:ACTion:RESet

Description: Command resets call to MCCH.
Parameter/Query: none

5.26.24 Protocol - Speech Traffic Channel Contents

:PROTocol:ACTion:TCHS

Description: Command defines Speech Traffic Channel contents.
Parameter: TALK | SILence | TONE
Set Format: CPD
Example: :PROTocol:ACTion:TCHS TONE
Sets Speech Traffic Channel to TONE.

5.26.25 Protocol - Test Mode Confirm

:PROTocol:ACTion:TMConfirm

Description: Command sets Test Mode Confirm.
Parameter/Query: none

5.26.26 Protocol - Test Set Start Transmission

:PROTocol:ACTion:TSTX

Description: Command starts Test Set Transmission.
Parameter/Query: none

5.26.27 Protocol - Test Set Stop Transmission

:PROTocol:ACTion:TSTCease

Description: Command stops Test Set Transmission.
Parameter/Query: none

5.26.28 Protocol - Mode of Operation

:PROTocol:MODE
:PROTocol:MODE?

Description: Set command defines Protocol Mode of Operation.
Query command returns parameter setting.

Parameter: MCCH | CALLING MOBILE | MOBILE ALERTING | TEST SET ALERTING | IN CALL (TEST TONE) | IN CALL (TALKBACK) | IN CALL (SILENCE) | CLEARING DOWN | MCCC (CALL ACTIVE) | FACCH (CALL ACTIVE)

Set/Query Format: ascii string

Example: :PROTocol:MODE 'FACCH'
Sets Protocol to FACCH.

Query Response: :PROTocol:MODE?
“FACCH”

5.26.29 Protocol - Registration Information

:PROTocol:RINFo?

Description: Command returns current Call Registration Information.

Query Data: <statusbyte>,<rclass>,<pclass>,<tei>,<itsi>

statusbyte (NR1): 0 = Invalid
1 = Valid

ITSI (ascii-string): ddddddddd or ddd/ddddd/ddddddddd where d = decimal character

TEI (ascii-string): hhhhhh/hh/hhhhhh/h where h = hex character

power class (CRD): PC1 | PC1L | PC2 | PC2L | PC3 | PC3L | PC4 | PC4L

receiver class (CRD): A, B or E and invalid items are returned as empty strings

Query Response: :PROTocol:RINFo?
1,”01000002”,”,”,”,”

5.27 POWER PROFILE FULL

5.27.1 Power - Control Burst Measurement at Symbol Point

:FETCh:POWer:SYMBol:xxx? p

Description: Command returns Profile at a Symbol for Control Bursts.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: -24 to 127 (NR1)
Normal Burst symbol range: -35 to 265 (NR1)

Query Data: <statusbyte>,<sample count>,<power>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

power (NR2): dBc

Query Response: :FETCh:POWer:SYMBol:CONTrol? 50
1,0,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

5.27.2 Power - Symbol Range

:FETCh:POWer:SYMBol:RANGe:CONTrol?
:FETCh:POWer:SYMBol:RANGe:NORMal?

Description: Command returns Symbol range for Normal or Control Bursts.

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:POWer:SYMBol:RANGe:CONTrol?
0,-24,126

NOTE Statusbyte may return more than one condition as a bitmask.

5.28 POWER PROFILE FRAME

5.28.1 Power Profile Frame - Burst Measurement at Symbol Point

:FETCh:PFRame:SYMBol:xxx? p

Description: Command returns Profile for Control or Normal Bursts at symbol point.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: -27 to +1038 (NR1)
Normal Burst symbol range: -27 to +1038 (NR1)

Query Data: <statusbyte>,<sample count>,<avg>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

avg (NR2): dBc

Query Response: :FETCh:PFRame:SYMBol:NORmal? 50
0,20,-76.01

NOTE Statusbyte may return more than one condition as a bitmask.

5.28.2 Power Profile Frame - Measurement Query

:FETCh:PFRame:xxx?

Description: Command returns Tx Power for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<sample count>,<avg>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

avg (NR2): dBm

Query Response: :FETCh:PFRame:NORmal?
0,20,28.5

NOTE Statusbyte may return more than one condition as a bitmask.

5.28.3 Power Profile Frame - Symbol Range

:FETCh:PFRame:SYMBol:RANGe:xxx?

Description: Command returns Symbol Range for Control or Normal Bursts

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): value

Query Response: :FETCh:PFRame:SYMBol:RANGe:CONTrol?
0,-27,1038

NOTE Statusbyte may return more than one condition as a bitmask.

5.29 PROTOCOL - GROUPS

5.29.1 Protocol - Group Count

:PROTocol:GROup:COUNt?

Description: Command returns total count of groups.

Query Format: NR1

Query Response: :PROTocol:GROup:COUNt?
24

5.29.2 Protocol - Group Call Information

:PROTocol:GROup:INFO?

Description: Command returns Requested Group Information.

Parameter: 1 to :COUNt? response (NR1)

Query Data: <statusbyte>,<GSSI>,<Usage>

statusbyte (NR1): 0 = Valid
1 = Invalid

GSSI (NR1): 0 to 16777215

Usage (NR1): 0 to 8

Query Response: :PROTocol:GROup:INFO? 3
0,8388630,6

NOTE Statusbyte may return more than one condition as a bitmask.

5.29.3 Protocol - Group Selection

:PROTocol:GROup:SELected?

Description: Command returns Selected Group Information.

Query Data: <statusbyte>,<GSSI>

statusbyte (NR1): 0 = Valid
1 = Invalid

GSSI (NR1): 0 to 16777215

Query Response: :PROTocol:GROup:SELected?
0,8388611

NOTE Statusbyte may return more than one condition as a bitmask.

5.30 PROTOCOL - MOBILE CLASSMARK TEST TILE

5.30.1 Protocol - Mobile Class Mark Information

:PROTocol:CMARk?

Description: Command returns Mobile Class Mark.

Query Data: <statusbyte>,<data01...to...data17>

statusbyte (NR1): 0 = Valid
1 = Invalid

data01 (NR1): 0 | 1 (Simplex Only | Duplex)
data02 (NR1): 0 | 1 (Single | Multislot)
data03 (NR1): 0 | 1 (Carrier) (Not Supported | Supported)
data04 (NR1): 0 | 1 (Voice) (Not Supported | Supported)
data05 (NR1): 0 | 1 (E-E Encrypt) (Not Supported | Supported)
data06 (NR1): 0 | 1 (Circuit Data) (Not Supported | Supported)
data07 (NR1): 0 | 1 (Packet Data) (Not Supported | Supported)
data08 (NR1): 0 | 1 (Fast Switching) (Not Supported | Supported)
data09 (NR1): 0 | 1 (DCK Air Encrypt) (Not Supported | Supported)
data10 (NR1): 0 | 1 (CLCH Needed) (Not Needed | Needed)
data11 (NR1): 0 | 1 (Concurrent CM) (Not Supported | Supported)
data12 (NR1): 0 | 1 (Advanced Link) (Not Supported | Supported)
data13 (NR1): 0 | 1 (Minimum Mode) (Not Supported | Supported)
data14 (NR1): 0 | 1 (Carrier Sig Chan) (Not Supported | Supported)
data15 (NR1): 0 | 1 (Authentication) (Not Supported | Supported)
data16 (NR1): 0 | 1 (SCK Air Encrypt) (Not Supported | Supported)
data17 (NR1): 0 | 1 | 2 (ED1+N/A | ED1+ED2 | ED2+ED2)

Query Response: :PROTocol:CMARk?
0,0,0,0,1,0,0,1,0,1,0,0,1,0,0,1,1,1

5.31 PROTOCOL - SDS MESSAGES

5.31.1 SDS Message - Protocol Information

:PROTocol:MESSage:SDS?

Description: Command returns Last SDS Message Received.

Query Data: <statusbyte>,<message_number>,<message type>,<encoding>,
<called ID_type>,<called ID number>,<ESN>,<service>,<report_type>,<message>

statusbyte (NR1): 0 = Valid
1 = Invalid

message_number (NR1): value (0 to 255)

message type (ascii-string):

TYPE 1	TYPE 4 (SIMPLE PIN AUTH)
TYPE 2	TYPE 4 (SDS TL TEXT)
TYPE 3	TYPE 4 (SDS TL GPS)
TYPE 4 (SIMPLE OTAR)	TYPE 4 (SDS TL WAP)
TYPE 4 (SIMPLE TEXT)	TYPE 4 (SDS TL WCMP)
TYPE 4 (SIMPLE GPS)	TYPE 4 (SDS TL M DMO)
TYPE 4 (SIMPLE WAP)	TYPE 4 (USER DEFINED)
TYPE 4 (SIMPLE WCMP)	TYPE 4 (UNKNOWN xxx where is decimal message type
TYPE 4 (SIMPLE M-DMO)	

encoding (ascii-string): If message type is Type 4 (SDS TL TEXT) or (Simple TEXT):

7 BIT (GSM)	PC 737 GREEK II (8 BIT)
ISO 1 LATIN 1 (8 BIT)	PC 850 LATIN I (8 BIT)
ISO 2 LATIN 2 (8 BIT)	PC 852 LATIN II (8 BIT)
ISO 3 LATIN 3 (8 BIT)	PC 855 CYRILLIC I (8 BIT)
ISO 4 LATIN 4 (8 BIT)	PC 857 TURKISH (8 BIT)
ISO 5 CYRILLIC (8 BIT)	PC 860 PORTUGUESE (8 BIT)
ISO 6 ARABIC (8 BIT)	PC 861 ICELANDIC (8 BIT)
ISO 7 GREEK (8 BIT)	PC 863 CANADIAN (8 BIT)
ISO 8 HEBREW (8 BIT)	PC 865 NORDIC (8 BIT)
ISO 9 LATIN 5 (8 BIT)	PC 866 RUSSIAN (8 BIT)
ISO 10 LATIN 6 (8 BIT)	PC 869 GREEK (8 BIT)
ISO 13 LATIN 7 (8 BIT)	16 BIT (ISO UCS2)
ISO 14 LATIN 8 (8 BIT)	UNKNOWN (where xxx is decimal coding scheme
ISO 15 LATIN 0 (8 BIT)	
PC 437 USA (8 BIT)	

encoding (ascii-string): If "message type" is Type 4 (SDS TL GPS)
NMEA 0183
RTCM SC-104
TETRA LOCATOR (TLP)
UNKNOWN (xxx where xxx is decimal coding scheme

called ID type (ascii string):
called ID number (ascii string): SNA & xxx, SSI & xxxxxxxx, or TSI & xxx/xxxxx/xxxxxxxx where xxx are decimal characters

ESN (phone number string): 1 to 24 chars or "-" if N/A)

service (ascii-string): INDIVIDUAL | GROUP

report_type (ascii-string): RECEIVED | CONSUMED | RECEIVED AND CONSUMED | NONE

message (ascii-string): If message type is Type 1 - xxxx
If message type is Type 2 - xxxxxxxx
If message type is Type 3 - xxxxxxxxxxxxxxxx
If message type is Type 4 SDS-TL Text or Simple Text, 7 or 8 bit encoded -aaaaaaaaaaaaaaaa.
Otherwise, xxxxxxxxxxxxxxxxx...where xxx... are hexadecimal characters and aaa... are ascii characters and invalid items are returned as empty strings.

Query :PROTocol:MESSage:SDS?

Response: 0,1,”TYPE 4(SDS TL TEXT)”,”UNKNOWN (-286331154)”,”0074200”,””,””,””,””

5.32 PROTOCOL - MESSAGE EVENT

5.32.1 SDS Message - Event Information

:PROTocol:MESSage:EVENt?

Description: Command returns latest event Status Message

Query Data: ascii string

"Call automatically aborted"
"Call automatically answered"
"Call from mobile established"
"Call to mobile accepted"
"Call to mobile answered"
"Call rejected by testset"
"Call restored"
"Call Setup failed"
"Call Setup timeout"
"Cleardown by testset (Call Hang Timer)"
"Commanded"
"Demand update"
"De-Registered"
"DTMF tone end"
"DTMF tone start"
"Disabled MS"
"DW request rejected, stay alive"
"Energy Economy change failed"
"Failed to end loopback"
"Group Call established"
"ITSI Attached"
"Loopback call failure"
"Loopback set failure"
"MCCH reset complete"
"Migrating Update"
"MS has roamed to new cell"
"MS roaming away (type3)"
"MS roaming to known cell (type2)"
"MS sent unsupported MM-Status"
"Periodic Update"
"Registered (Call Restore Roaming)"
"Registered (Call Restore Migrating)"
"Registered (Commanded)"
"Registered (Disabled MS)"
"Registered (ITSI Attach)"
"Registered (Migrating Update)"
"Registered (Roaming Update)"
"Registered (Periodic Update)"
"Registered (Test Mode)"
"Registering (Migrating Update)"
"Registration failed"
"Rejected Energy Economy request"
"Released, ACK'd service incomplete"
"Released, call rejected"
"Released, called party busy"
"Released, cause unknown"
"Released, expiry of MS timer"
"Released, expiry of TS timer"
"Released, invalid call identifier"
"Released, SwMI requested disconnect"
"Released, user requested disconnect"
"Requested service not available on MS"
"Roaming Update"
"SDS Acknowledge from MS received"
"SDS Message from MS received"
"SDS Short Report from MS received"
"SDS Std Consumed Report sent to MS"
"SDS Std Received Report sent to MS"
"SDS Std Report from MS received"
"SDS-TL ACK sent to MS"
"Starting Direct Mode Operation"
"Status Message from MS received"
"Status/SDS sent to MS"
"Status/SDS send to MS failed"
"Status/SDS sent to group"
"Test Mode set failure"
"Test Mode supported failure"
"Transmission Failed"
"U Dual Watch Mode response"
"U Dual Watch request"
"U Energy Economy response"
"U Frequency Bands info"
"U MMST Gate add list req(refused)"
"U MMST Gate change reg accept (refused)"
"U MMST Gate continue req(refused)"
"U MMST Gate remove list accept (refused)"
"U MMST Gate remove list req(refused)"
"U MMST Gate replace list req(refused)"
"U MMST Gate reserved code(refused)"
"U MMST Gate start req(refused)"
"U MMST Gate start list req(refused)"
"U MMST Gate stop accept(refused)"
"U MMST Gate stop req(refused)"
"U Scanning on"
"U Scanning off"
"U Terminating Dual Watch request"
"Unsupported disconnect cause"

Query Response: :PROTocol:MESSage:EVENt?
Call from mobile established

5.33 PROTOCOL - STATUS MESSAGES

5.33.1 SDS Message - Status Information

:PROTocol:MESSage:STATus?

Description: Command returns last Status Message Received.

Query Data: <statusbyte>,<called ID_type>,<called ID number>,<ESN>,<message (hex)>,<message (decimal)>

statusbyte (NR1): 0 = Valid
1 = Invalid

called ID_type (ascii-string): SNA & xxx

called ID number (ascii-string): SSI & xxxxxxxx
TSI & xxx/xxxxx/xxxxxxxx where xxx... are decimal characters

ESN (phone number string): 1 to 24 chars or "-" if N/A)

message (hex string): 0 to FFFF

message (decimal): 0 to 65535

Query Response: :PROTocol:MESSage:STATus?
0,”SSI”,””,””,”9001”,”36865”

5.34 RF SETTINGS TEST TILE

5.34.1 Duplex Spacing - Mode of Operation

:DUPLex:LOCK
:DUPLex:LOCK?

Description: Enables/disables Duplex Spacing.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :DUPLex:LOCK ON
Sets Duplex Mode of Operation to ON.

Query Response: :DUPLex:LOCK?
1

NOTE Command is only valid when No Plan is selected as the Channel Plan.

5.34.2 Duplex Spacing - Offset Value

:DUPLex:SPACing
:DUPLex:SPACing?

Description: Set command defines the RF Duplex Spacing.
Query command returns parameter setting.

Range: -999.0 to +999.0 MHz

Units: Hz | kHz | MHz | GHz

Default Value: 10.0 MHz

Set/Query Format: NRf | NR2 (Hz)

Example: :DUPLex:SPACing 15MHz
Sets Duplex Spacing to 15.0 MHz.

Query Response: :DUPLex:SPACing?
15000000.0

NOTE Command is only valid when No Plan is selected as the Channel Plan.

5.34.3 RF Analyzer - Expected Receive Power Level

:RF:ANALyzer:LEVel:EVALue
:RF:ANALyzer:LEVel:EVALue?

Description: Set command defines Expected Power Level.
Query command returns parameter setting.

Range: **Pre-Amp OFF**
T/R: -40.0 to +55.0 dBm in 5 dB steps
ANT: -80.0 to 0.0 dBm in 5 dB steps

Range: **Pre-Amp ON**
T/R: -50.0 to +45.0 dBm in 5 dB steps
ANT: -100.0 to -20.0 dBm in 5 dB steps

Units: dBm

Default Value: 40.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:ANALyzer:LEVel:EVALue 45dBm
Sets Expected Power Level to 45.0 dBm/30.0 W.

Query Response: :RF:ANALyzer:LEVel:EVALue?
45.0

NOTE
Only if CMode is defined as EXPected.
Command not valid when participating in a call.

5.34.4 RF Analyzer - Input Connector

:RF:ANALyzer:PORT
:RF:ANALyzer:PORT?

Description: Set command selects the RF Input Connector.
Query command returns parameter setting.

Parameter: TR | ANT

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:PORT ANT
Selects Antenna Connector as RF Input Connector.

Query Response: :RF:ANALyzer:PORT?
ANT

NOTE
Refer to 3900 Platform Specifications for maximum input values.

5.34.5 RF Analyzer - Level Control Mode

:RF:ANALyzer:LEVel:CMODe
:RF:ANALyzer:LEVel:CMODe?

Description: Set command defines Level Control mode.
Query command returns parameter setting.

Parameter: EXPected | OPEN

Default Value: Expected (In Call)
Open Loop (Not In Call)

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:LEVel:CMODe EXPECTED
Sets Level Control Mode to Expected.

Query Response: :RF:ANALyzer:LEVel:CMODe?
EXP

5.34.6 RF Analyzer - Receiver Automatic Gain Control

:RF:ANALyzer:AGC
:RF:ANALyzer:AGC?

Description: Set command Enables/Disables the AGC mode of operation.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:ANALyzer:AGC OFF
Disables Automatic Gain Control.

Query Response: :RF:ANALyzer:AGC?
0

5.34.7 RF Analyzer - Receive Frequency

:RF:ANALyzer:FREQuency
:RF:ANALyzer:FREQuency?

Description: Set command defines the RF Analyzer Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units : Hz | kHz | MHz | GHz

Default Value: 380.0 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:ANALyzer:FREQuency 390 MHz
Sets RF Analyzer Frequency to 390.0 MHz.

Query Response: :RF:ANALyzer:FREQuency?
390000000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

5.34.8 RF Analyzer - Receiver Pre-Amplifier

:RF:ANALyzer:RECeiver:AMP
:RF:ANALyzer:RECeiver:AMP?

Description: Set command Enables/Disables Receiver Pre-Amplifier.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :RF:ANALyzer:RECeiver:AMP ON
Enables Receiver Pre-Amplifier.

Query Response: :RF:ANALyzer:RECeiver:AMP?
1

5.34.9 RF Analyzer - RF Control Channel

:RF:CHANnel:CONTrol
:RF:CHANnel:CONTrol?

Description: Set command defines RF Control Channel.
Query command returns parameter setting.

Range: defined by selected Channel Plan

Default Value defined by selected Channel Plan

Set/Query Format: NR1

Example: :RF:CHANnel:CONTrol 3900
Sets RF Control Channel to 3900.

Query Response: :RF:CHANnel:CONTrol?
3900

5.34.10 RF Analyzer - Traffic Channel Number

:RF:CHANnel:TRAFfic:NUMBer
:RF:CHANnel:TRAFfic:NUMBer?

Description: Set command defines RF Traffic Channel.
Query command returns parameter setting.

Range: defined by selected Channel Plan

Default Value: defined by selected Channel Plan

Set/Query Format: NR1

Example: :RF:CHANnel:TRAFfic:NUMBer 4000
Sets RF Traffic Channel to 4000.

Query Response: :RF:CHANnel:TRAFfic:NUMBer?
4000

5.34.11 RF Analyzer - Traffic Time Slot

:RF:CHANnel:TRAFfic:TSLot
:RF:CHANnel:TRAFfic:TSLot?

Description: Set command defines RF Traffic Channel Time Slot.
Query command returns parameter setting.
Parameter: 1 | 2 | 3 | 4
Default Value: 3
Set/Query Format: NR1
Example: :RF:CHANnel:TRAFfic:TSLot 4
Sets RF Traffic Channel Time Slot to 4.
Query Response: :RF:CHANnel:TRAFfic:TSLot?
4

5.34.12 RF Generator - Enable

:RF:GENerator:STATe
:RF:GENerator:STATe?

Description: Set command Enables/Disables RF Generator.
Query command returns parameter setting.
Parameter: OFF | ON | 0 | 1
Default Value: ON
Set/Query Format: Boolean
Example: :RF:GENerator:STATe ON
Enables RF Generator.
Query Response: :RF:GENerator:STATe?
1

5.34.13 RF Generator - Frequency

:RF:GENerator:FREQuency
:RF:GENerator:FREQuency?

Description: Set command defines RF Generator Frequency.
Query command returns parameter setting.
Range: 100.0 kHz to 2.71 GHz
Units: Hz | kHz | MHz | GHz
Default Value: 390.00 MHz
Set/Query Format: NRf | NR1 (Hz)
Example: :RF:GENerator:FREQuency 400MHz
Sets RF Generator Frequency to 400.0 MHz.
Query Response: :RF:GENerator:FREQuency?
400000000

5.34.14 RF Generator - Level

:RF:GENerator:LEVel
:RF:GENerator:LEVel?

Description: Set command defines RF Generator Level.
Query command returns parameter setting.

Range:
TR: -130.0 to -40.0 dBm
GEN: -130.0 to 0.0 dBm

Units: dBm

Default Value: -75.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:GENerator:LEVel -40dBm
Sets RF Generator Level to -40.0 dBm.

Query Response: :RF:GENerator:LEVel?
-40.0

5.34.15 RF Generator - Modulator Enable

:RF:GENerator:MODulator
:RF:GENerator:MODulator?

Description: Set command Enables/Disables Modulation Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 1 | 0

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:MODulator ON
Enables Modulation Generator.

Query Response: :RF:GENerator:MODulator?
1

5.34.16 RF Generator - Output Connector

:RF:GENerator:PORT
:RF:GENerator:PORT?

Description: Set command selects the RF Out connector.
Query command returns parameter setting.

Parameter: TR | GEN

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:GENerator:PORT GEN
Selects Generator Connector as RF Output Connector.

Query Response: :RF:GENerator:PORT?
GEN

5.35 RX MEASUREMENTS

5.35.1 Rx Measurements - Continuous

:INITiate:CONTinuous:RXMeas
:INITiate:CONTinuous:RXMeas?

Description: Command initiates Continuous Rx Measurement sweeps.
Parameter: OFF | ON | 0 | 1
Set/Query Format: Boolean
Default Value: ON
Example: :INITiate:CONTinuous:RXMeas ON
Enables continuous Rx Measurement sweeps.
Query Response: :INITiate:CONTinuous:RXMeas?
1

5.35.2 Rx Measurements - Single

:INITiate:IMMediate:RXMeas

Description: Command initiates Single Rx Measurements.
Parameter/Query: none

5.35.3 Rx Measurements - Stop Measurements

:ABORt:RXMeas

Description: Command stops Rx Measurements.
Parameter/Query: none

5.35.4 Bit Error Rate - Measurement Query

:FETCh:RXMeas:BER0?
:FETCh:RXMeas:BER1?
:FETCh:RXMeas:BER2?

Description: Command returns BER Class 0, 1 or 2 Rx Measurement.
Query Data: <statusbyte>,<failbyte>,<rx class>,<BER>,<error bits>,<total bits>
statusbyte (NR1): 0 = Valid
1 = Invalid
failbyte (NR1): 0 = Passed
1 = Failed
receive class (NR1): A | B | E
BER (NR2): %
error bits (NR1): value
total bits (NR1): value
Query Response: :FETCh:RXMeas:BER0?
0,0,A,0.00000,0,1020

5.35.5 Bit Error Rate Measurements - Sample Count

:CONFigure:RXMeas:SAMPle:xxx
:CONFigure:RXMeas:SAMPle:xxx?

Description: Set command defines number of samples used to calculate BER Class 0, 1 or 2 Rx Measurements.
Query command returns parameter setting.

Range: 1,000 to 10,000,000

Default Value: 15,000

Set/Query Format: NR1

Parameter (xxx): BER0 | BER1 | BER2

Example: :CONFigure:RXMeas:SAMPle:BER0 100000

Query Response: :CONFigure:RXMeas:SAMPle:BER0?
100000

5.35.6 Rx BER and MER - Measurement Query

:FETCh:RXMeas:MER?
:FETCh:RXMeas:RBER0?
:FETCh:RXMeas:RBER1?

Description: Command returns MER, RBER Class 0 or RBER Class 1 Rx Measurements.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER>,<error bits>,<total bits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

receive class (NR1): A | B | E

BER (NR2): %

error bits (NR1): value

total bits (NR1): value

Query Response: :FETCh:RXMeas:MER?
1,0,A,0.00000,0,0

5.35.7 Rx Bit Error Rate - Sample Count

:CONFigure:RXMeas:SAMPle:xxx
:CONFigure:RXMeas:SAMPle:xxx?

Description: Set command defines number of samples used to calculate MER, RBER0 or RBER1 Rx Measurements.
Query command returns parameter setting.

Parameter (xxx): MER | RBER0 | RBER1

Range:

RBER Class 0/1: 1,000 to 10,000,000

MER: 10 to 1,000,000

Default Value:

RBER Class 0/1: 15,000

MER: 300

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:RBER0 5000000
Sets number of samples used to calculate RBER measurements to 5,000,000.

Query Response: :CONFigure:RXMeas:SAMPle:RBER0?
5000000

5.36 TX MEASUREMENTS TEST TILE

5.36.1 Tx Measurements - Continuous Burst

:INITiate:CONTinuous:TXMeas:CONTrol
:INITiate:CONTinuous:TXMeas:NORMal

Description: Command initiates Continuous Tx Measurement sweeps for Control or Normal bursts.

Parameter: OFF | ON | 0 | 1

Set/Query Format: Boolean

Default Value: ON

Example: :INITiate:CONTinuous:TXMeas:CONTrol ON
Enables continuous Tx Measurement sweeps for Control burst.

Query Response: :INITiate:CONTinuous:TXMeas:CONTrol?
1

5.36.2 Tx Measurements - Single Burst

:INITiate:IMMediate:TXMeas:CONTrol
:INITiate:IMMediate:TXMeas:NORMal

Description: Command initiates Single Tx Measurements sweep for Control or Normal bursts.

Parameter/Query: none

5.36.3 Tx Measurements - Stop Measurements

:ABORt:TXMeas:CONTrol
:ABORt:TXMeas:NORMal

Description: Command stops Tx Measurements for Control or Normal Bursts.

Parameter/Query: none

5.36.4 Burst Timing - Measurement Query

:FETCh:BTIMing:xxx?

Description: Command returns Burst Timing measurement for Control or Normal bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR2): symbols

Query Response: :FETCh:BTIMing:CONTrol?
0,0,20,-0.02,0.00,-0.03,-0.03

NOTE Statusbyte may return more than one condition as a bitmask.

5.36.5 Burst Timing - Sample Count

:CONFigure:BTIMing:SAMPle:xxx
:CONFigure:BTIMing:SAMPle:xxx?

Description: Sets number of samples used to calculate Burst Timing measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Burst Type (xxx): CONTrol | NORMal

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Example: :CONFigure:BTIMing:SAMPle:CONTrol 50
Sets number of sample used to calculate Burst Timing Control burst measurements to 50.

Query Response: :CONFigure:BTIMing:SAMPle:CONTrol?
50

5.36.6 Frequency Error - Measurement Query

:FETCh:MACCuracy:FERRor:xxx?

Description: Command returns Frequency Error measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR1): Hz

Query Response: :FETCh:MACCuracy:FERRor:NORMal?
0,0,20,-17.9,-17.6,-18.7,-18.7

NOTE Statusbyte may return more than one condition as a bitmask.

5.36.7 Frequency Error - Sample Count

:CONFigure:MACCuracy:FERRor:SAMPle:xxx
:CONFigure:MACCuracy:FERRor:SAMPle:xxx?

Description: Sets number of samples used to calculate Frequency Error measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:MACCuracy:FERRor:SAMPle:CONTrol 50
Sets number of samples used to calculate Frequency Error Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:FERRor:SAMPle:CONTrol?
50

5.36.8 Power - Measurement Query

:FETCh:POWer:xxx?

Description: Command returns Power measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
65536 = Profile failed

sample count (NR1): value

avg, max, min (NR1): dBm

Query Response: :FETCh:POWer:NORMal?
0,7,20,28.5,28.5,28.4

NOTE Statusbyte may return more than one condition as a bitmask.

5.36.9 Power - Sample Count

:CONFigure:POWer:SAMPle:xxx
:CONFigure:POWer:SAMPle:xxx?

Description: Sets number of samples used to calculate Power measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:POWer:SAMPle:CONTrol 50
Sets number of samples used to calculate Power Control burst measurements to 50.

Query Response: :CONFigure:POWer:SAMPle:CONTrol?
50

5.36.10 Residual Carrier - Measurement Query

:FETCh:MACCuracy:RCARrier:xxx?

Description: Command returns Residual Carrier measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR1): %

Query Response: :FETCh:MACCuracy:RCARrier:CONTrol?
0,0,20,0.3,0.8

NOTE Statusbyte may return more than one condition as a bitmask.

5.36.11 Residual Carrier - Sample Count

:CONFigure:MACCuracy:RCARrier:SAMPle:xxx
:CONFigure:MACCuracy:RCARrier:SAMPle:xxx?

Description: Sets number of samples used to calculate Residual Carrier measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:MACCuracy:RCARrier:SAMPle:CONTrol 50
Sets number of samples used to calculate Residual Carrier Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:RCARrier:SAMPle:CONTrol?
50

5.36.12 Vector Peak - Measurement Query

:FETCh:MACCuracy:VPEak:xxx?

Description: Command returns Vector Peak measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR1): %

Query Response: :FETCh:MACCuracy:VPEak:NORMal?
0,0,20,9.8,10.9

NOTE Statusbyte may return more than one condition as a bitmask.

5.36.13 Vector Peak - Sample Count

:CONFigure:MACCuracy:VPEak:SAMPle:xxx
:CONFigure:MACCuracy:VPEak:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector Peak measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:MACCuracy:VPEak:SAMPle:CONTrol 50
Sets number of samples used to calculate Vector Peak Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VPEak:SAMPle:CONTrol?
50

5.36.14 Vector RMS - Measurement Query

:FETCh:MACCuracy:VRMS:xxx?

Description: Command returns Vector RMS measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR1): %

Query Response: :FETCh:MACCuracy:VRMS:CONTrol?
0,0,20,4.9,5.2

NOTE Statusbyte may return more than one condition as a bitmask.

5.36.15 Vector RMS - Sample Count

:CONFigure:MACCuracy:VRMS:SAMPle:xxx
:CONFigure:MACCuracy:VRMS:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector RMS measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:MACCuracy:VRMS:SAMPle:CONTrol 50
Sets number of samples used to calculate Vector RMS Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VRMS:SAMPle:CONTrol?
50

Chapter 6 - TETRA MS T1 Remote Commands

6.1 INTRODUCTION

This chapter lists the Remote Commands for configuring TETRA MS T1 System Parameters. Remote Commands are listed alphabetically under the following Display Tile headings:

6.2 AUDIO TILE

6.2.1 AF Generators - Enable

:AF:GENerator:SOURceN:ENABle
:AF:GENerator:SOURceN:ENABle?

Description:	Set command Enables/Disables the specified AF Generator. Query command returns parameter setting.
Parameter:	OFF | ON | 0 | 1
Default Value:	OFF
Set/Query Format:	Boolean
Example:	:AF:GENerator:SOURce2:ENABle ON Enables AF Generator 2.
Query Response:	:AF:GENerator:SOURce2:ENABle? 1
NOTE	SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

6.2.2 AF Generators - Frequency

:AF:GENerator:SOURceN:FREQuency
:AF:GENerator:SOURceN:FREQuency?

Description: Set command defines the frequency source for the specified AF Generator. Query command returns parameter setting.
Range: 1.0 Hz to 20.0 kHz
Units: Hz | kHz
Default Value:
AF 1: 1.0 kHz
AF 2: 300.0 Hz
AF 3: 3.4 kHz
Set/Query Format: NRf | NR2 (Hz)
Example: :AF:GENerator:SOURce3:FREQuency 15kHz
Sets AF Generator 3 Frequency to 15.0 kHz.
Query Response: :AF:GENerator:SOURce3:FREQuency?
15000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

6.2.3 AF Generators - Level

:AF:GENerator:SOURceN:LEVel
:AF:GENerator:SOURceN:LEVel? <units>

Description: Set command defines the Source Level for the specified AF Generator. Query command returns parameter setting in specified units.
Range: 1.0 mV to 5.0 Vrms
Units: dBm | V | mV | µV | nV | dBµV
Default Value: 100.0 mV
Set/Query Format: NRf | NR2 (mV)
Example: :AF:GENerator:SOURce1:LEVel 5V
Sets AF Generator 1 Level (Amplitude) to 5.0 Volts.
Query Response: :AF:GENerator:SOURce1:LEVel? nV
50000000000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

6.2.4 AF Generators - Waveform

:AF:GENerator:SOURceN:SHAPe
:AF:GENerator:SOURceN:SHAPe?

Description: Set command defines the Waveform for the specified AF Generator.
Query command returns parameter setting.

Parameter: SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF

Query Data: SNR | SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF | TONESEQ | TONEREM

Default Value: SINE

Set/Query Format: CPD | CRD

Example: :AF:GENerator:SOURce2:SHAPe SQUare
Sets AF Generator 2 Waveform shape to Square.

Query Response: :AF:GENerator:SOURce2:SHAPe?
SQU

NOTE

SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

DTMF waveform is only valid on AF Generator 1. AF Generator 2 is unavailable when DTMF is selected on AF Generator 1.

DCS and DCSINV are not supported on AF Generator 3.

AF Generator 1 is unavailable as a modulation source when Normal MOD SNR Noise Measurements are defined (:CONFigure:MOD:ANALyzer:SNR:MODE 1) and AF:GENerator:SOURce1:SHAPe? returns SNR.

6.2.5 AF Measurements - AF Level Audio Units

:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts
:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?

Description: Set command defines the unit of measure for AF Audio Level measurement.
Query command returns parameter setting.

Parameter: V | dBr | dBV | dBm | W

Default Value: V

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts DBR
Displays AF Level Audio measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?
DBR

6.2.6 AF Measurements - AF Level Balanced Units

:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts
:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?

Description: Set command defines the unit of measure for AF Balanced Level measurement.
Query command returns parameter setting.

Parameter: dBm | dBr | V

Default Value: dBm

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts DBR
Displays AF Balanced Level measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?
DBR

NOTE AF Measurement Source must be defined as BALANCED for command to be valid.

6.2.7 AF Measurements - Impedance Audio 1

:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?

Description: Set command defines the Impedance for Audio 1 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD UNBHI
Sets selected Audio 1 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?
INBHI

NOTE Sets Impedance of Audio 1 Input connector whether or not Audio 1 is defined as Audio Source.

6.2.8 AF Measurements - Impedance Audio 2

:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?

Description: Set command defines the Impedance for Audio 2 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD UNBHI
Sets selected Audio 2 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?
INBHI

NOTE Sets Impedance of Audio 2 Input connector whether or not Audio 2 is defined as Audio Source.

6.2.9 AF Measurements - Filter Type

:AF:ANALyzer:MFILter
:AF:ANALyzer:MFILter?

Description: Set command selects the Audio Analyzer Post Detection Filter.
Query command returns parameter setting.

Parameter: PSOPh | None | LP1 | LP2 | LP3 | LP4 | LP5 | LP6 | LP7 | HP1 | HP2 | HP3 | BP0 | BP1 | BP2 | BP3 | BP4 | BP5 | BP6 | BP7 | BP8 | BP9 | BP10 | BP11 | BP12 | BP13 | BP14 | BP15 | BP16

where:

NONE = No Filter	BP2 = 0.3 to 5.0 kHz BP
PSOPh = Psoph (CMESS or CCITT)	BP3 = 0.3 to 20.0 kHz BP
LP1 = 300.0 Hz LP	BP4 = 0.3 to 15.0 kHz BP
LP2 = 5.0 kHz LP	BP5 = 0.02 to 300.0 Hz BP
LP3 = 20.0 kHz LP	BP6 = 0.02 to 3.0 kHz BP
LP4 = 15.0 kHz LP	BP7 = 0.02 to 3.4 kHz BP
LP5 = 3.0 kHz LP	BP8 = 0.02 to 5.0 kHz BP
LP6 = 625.0 kHz LP*	BP9 = 0.02 to 15.0 kHz BP
LP7 = 10.0 kHz LP*	BP10 = 0.02 to 20.0 kHz BP
LP8 = 100.0 Hz LP*	BP11 = 0.05 to 300.0 Hz BP
HP1 = 300.0 Hz HP**	BP12 = 0.05 to 3.0 kHz BP
HP2 = 20.0 Hz HP	BP13 = 0.05 to 3.4 kHz BP
HP3 = 50.0 Hz HP	BP14 = 0.05 to 5.0 kHz BP
BP0 = 0.3 to 3.0 kHz BP	BP15 = 0.05 to 15.0 kHz BP
BP1 = 0.3 to 3.4 kHz BP	BP16 = 0.05 to 20.0 kHz BP

Default Value: NONE (No Filter)

Set/Query Format: CPD | CRD

Example: :AF:ANALyzer:MFILter LP3
Selects 20.0 kHz Low Pass Filter for AF measurements.

Query Response: :AF:ANALyzer:MFILter?
LP3

NOTE

Filter selected should be appropriate for signal received from UUT.
When PSOPH is selected, Filter weight is defined using :CONFigure:AF:MFILter command.
Test Set does not process any commands following this one until this command is completed.
*LP6, LP7 and LP8 are used by the Audio Analyzer Tracking Generator and can not be defined by user, but may be returned as query data.
**When HP1 (300 Hz HP) is selected, CONFigure:AF:HZ300FILter selects the type of 300 Hz filter being used.

6.2.10 AF Measurements - Source

:CONFigure:AF:ANALyzer:SOURce
:CONFigure:AF:ANALyzer:SOURce?

Description: Set command defines the Source for Audio Analyzer.
Query command returns parameter setting.

Parameter: AUD1 | AUD2 | BAL | MIC

Default Value: AUD1

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce MIC
Selects Microphone as the AF Analyzer Audio Source.

Query Response: :CONFigure:AF:ANALyzer:SOURce?
MIC

NOTE Test Set does not process any commands following this one until this command is completed.

6.2.11 AF Measurements - Query AF Frequency Measurement

:FETCh:AF:ANALyzer:FREQuency?

Description: Command returns AF Frequency measurement data.

Query Data: <statusbyte>, <avgcount>, <avg>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

avgcount (NR1): value

avg (NR2): Hz

Query Response: :FETCh:AF:ANALyzer:FREQuency?
0,25,1000.0

NOTE Statusbyte may return more than one condition as a bitmask.

6.2.12 AF Measurements - Query AF Level Measurement

:FETCh:AF:ANALyzer:LEVel?

Description: Command returns AF Level measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<units>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1):
0 = All limit checks passed
1 = Average upper failed limit
2 = Average lower failed limit

avgcount (NR1): value

avg (NR2):
mV (Unbalanced)
dBm (Balanced)

units (NR1):
6 = dBm
7 = V
11 = W
12 = mW
13 = µW
16 = dBr
17 = dBV
20 = nW

Query Response: :FETCh:AF:ANALyzer:LEVel?
0,0,1,0.002

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

6.2.13 AF Measurements - Query AF Sinad Measurement

:FETCh:AF:ANALyzer:SINad?

Description: Command returns AF Sinad measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<wc>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1): 0 = All limit checks passed
2 = Average lower failed limit
8 = Worst Case lower failed limit

avgcount (NR1): value

avg, wc (NR2): dB

Query Response: :FETCh:AF:ANALyzer:SINad?
0,0,25,0.01,0.00

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

6.2.14 Loudspeaker

:CONFigure:PORT:LOUDspeaker
:CONFigure:PORT:LOUDspeaker?

Description: Set command selects Loudspeaker port.
Query command returns parameter setting.

Parameter: OFF | AUDio | FAUDio | DEMod | DDEMod | FDEMod | FDDEMod

Default Value: OFF

Set/Query Format: CPD | CRD

Example: :CONFigure:PORT:LOUDspeaker AUDio
Selects Audio as the Loudspeaker port.

Query Response: :CONFigure:PORT:LOUDspeaker?
AUD

6.3 CHANNEL PLAN CONFIGURATION

6.3.1 Channel Plan - Channel Plan Information

:CONFigure:CHPLan:INFO?

Description: Command returns information about current Channel Plan.

Query Data: <plan_name>,<frequency band>,<offset>,<duplex spacing>,
<reverse operation>,<block 1 lowest channel>,<block 1 highest channel>,
<block 1 lowest channel downlink freq>,<block 1 duplex offset>,
<block 1 channel spacing>,<block 2 state>,<block 2 lowest channel>,
<block 2 highest channel>,<block 2 lowest channel downlink freq>,
<block 2 duplex offset>,<block 2 channel spacing>

Plan Name:	ascii string
Frequency Band:	NR1
Offset:	NR1 (Hz)
Duplex Spacing:	NR1 (Hz)
Reverse Operation:	NR1
Lowest Channel:	NR1 (Hz)
Highest Channel:	NR1
Low Ch DLink Freq:	NR1
Duplex Offset:	NR1 (Hz)
Channel Spacing:	NR1 (Hz)
Block 2 State:	CRD

Query Response: :CONFigure:CHPLan:INFO?
"TETRA 380-400 +12.5",3,3,0,0,3600,3999,390012500,100000000,2500,
EXCL,0,0,0,0,0

6.3.2 Channel Plan - Delete Channel Plan

:CONFigure:CHPLan:DELete

Description: Command deletes specified custom Channel Plan.

Parameter: ascii string

Example: :CONFigure:CHPLan:DELete "test_plan"
Deletes Channel Plan named 'test_plan'.

Query Response: no query

NOTE Command only applies to customized Channel Plans: Pre-defined Channel Plans can not be deleted.

6.3.3 Channel Plan - Load Channel Plan

:CONFigure:CHPLan:LOAD
:CONFigure:CHPLan:LOAD?

Description: Set command loads named plan as current Channel Plan.
Query command returns name of Channel Plan currently loaded.

Parameter: No Plan | TETRA 380-400 +12.5 | TETRA 380-400 ZERO | TETRA 410-430 +12.5 | TETRA 410-430 -6.25 | TETRA 410-430 ZERO | TETRA 450-470 +12.5 | TETRA 450-470 ZERO | TETRA 805-870 +12.5 | TETRA 805-870 ZERO | TETRA 870-921 +12.5 | TETRA 870-921 ZERO | User Defined (max 20 character)

Default Value: TETRA 380-400 +12.5

Set/Query Format: ascii string | ascii response data

Example: :CONFigure:CHPLan:LOAD “TETRA 380-400 ZERO”
Loads TETRA 380-400 ZERO Channel Plan.

Query Response: :CONFigure:CHPLan:LOAD?
TETRA 380-400 ZERO

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

6.3.4 Channel Plan - New Channel Plan

:CONFigure:CHPLan:NEW

Description: Command creates new Channel Plan.

Parameters: <plan_name>,<frequency band>,<offset>,<duplex spacing>,<reverse operation>,<block 1 data>,<block 2 data>

		Parameter/Range	Format	Default
	Plan Name	20 character max	ascii string	
System Info	**Freq Band**	0 to 15	NR1	
	Offset	0 to 3	NR1	
	Duplex Spacing	0 to 7	NR1	
	Reverse Operation	0 | 1	NR1	
Block 1	**Lowest Channel**	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies
Block 2	**State**	INCL | EXCL	CPD	varies
	Lowest Channel	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies

Example: :CONFigure:CHPlan:NEW
“test_plan”,3,3,0,0,3600,3999,390012500,100000000,2500,EXCL,0,0,0,0,0

NOTE

Default values vary according to selected Channel Plan.
no query

6.4 MOBILE PARAMETERS CONFIGURATION

6.4.1 Mobile Parameters - Power Class

:CONFigure:MPARameter:PCLass
:CONFigure:MPARameter:PCLass?

Description: Set command defines Mobile Power Class.
Query command returns parameter setting.

Parameter: PC1 | PC1L | PC2 | PC2L | PC3 | PC3L | PC4 | PC4L

where:
PC1 = 45.0 dBm / 30.0 W
PC1L = 42.5 dBm / 20.0 W
PC2 = 40.0 dBm / 10.0 W
PC2L = 37.5 dBm / 5.0 W
PC3 = 35.0 dBm / 3.0 W
PC3L = 32.5 dBm / 2.0 W
PC4 = 30.0 dBm / 1.0 W
PC4L = 27.5 dBm / 500 mW

Default Value: PC4 (30.0 dBm / 1.0 W)

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:PCLass PC2
Sets Power Class to PC2 (42.0 dBm/15.0 W).

Query Response: :CONFigure:MPARameter:PCLass?
PC2

6.4.2 Mobile Parameters - Receiver Class

:CONFigure:MPARameter:RCLass
:CONFigure:MPARameter:RCLass?

Description: Set command defines Mobile Receiver Class.
Query command returns parameter setting.

Parameter: A | B | E

Default Value: A

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:RCLass E
Sets Receiver Class to E.

Query Response: :CONFigure:MPARameter:RCLass?
E

6.5 OFFSETS CONFIGURATION

6.5.1 RF Analyzer - Offset Enable

:CONFigure:OFFSet:ANALyzer:ENABle
:CONFigure:OFFSet:ANALyzer:ENABle?

Description: Set command Enables/Disables the RF Analyzer Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:ANALyzer:ENABle ON
Enables RF Analyzer Offset.

Query Response: :CONFigure:OFFSet:ANALyzer:ENABle?
1

6.5.2 RF Analyzer - Offset Value

:CONFigure:OFFSet:ANALyzer:VALue
:CONFigure:OFFSet:ANALyzer:VALue?

Description: Set command defines the RF Analyzer Offset Value.
Query command returns parameter setting.

Range: -40.0 to +40.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:ANALyzer:VALue -10dB
Sets RF Analyzer Offset to -10.0 dB.

Query Response: :CONFigure:OFFSet:ANALyzer:VALue?
-10.00

6.5.3 RF Generator - Offset Enable

:CONFigure:OFFSet:GENerator:ENABle
:CONFigure:OFFSet:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:GENerator:ENABle ON
Enables RF Generator Offset.

Query Response: :CONFigure:OFFSet:GENerator:ENABle?
1

6.5.4 RF Generator - Offset Value

:CONFigure:OFFSet:GENerator:VALue
:CONFigure:OFFSet:GENerator:VALue?

Description: Set command defines RF Generator Offset Value.
Query command returns parameter setting.
Range: -40.0 to +40.0 dB
Units: dB
Default Value: 0.0 dB
Set/Query Format: NRf | NR2
Example: :CONFigure:OFFSet:GENerator:VALue 2.5dB
Set RF Generator Offset to 2.5 dB.
Query Response: :CONFigure:OFFSet:GENerator:VALue?
2.5

6.5.5 Timing - Offset Enable

:CONFigure:OFFSet:TIMing:ENABle
:CONFigure:OFFSet:TIMing:ENABle?

Description: Set command Enables/Disables the Timing Offset.
Query command returns parameter setting.
Parameter: OFF | ON | 0 | 1
Default Value: OFF
Set/Query Format: Boolean
Example: :CONFigure:OFFSet:TIMing:ENABle ON
Enables Timing Offset.
Query Response: :CONFigure:OFFSet:TIMing:ENABle?
1

6.5.6 Timing - Offset Value

:CONFigure:OFFSet:TIMing:VALue
:CONFigure:OFFSet:TIMing:VALue?

Description: Set command defines the Timing Offset Value.
Query command returns parameter setting.
Range: -999.99 to +999.99 symbols
Units: symbols
Default Value: 0.0 symbols
Set/Query Format: NRf | NR2
Example: :CONFigure:OFFSet:TIMing:VALue -150
Sets TIming Offset to -150.00.
Query Response: :CONFigure:OFFSet:TIMing:VALue?
-150

6.6 RX MEASUREMENTS LIMITS CONFIGURATION

6.6.1 Rx Measurements - Initialize Limits

:LIMits:RXMeas:INITialize

Description: Command Initializes Rx Measurement Limits as Dynamic or Extreme.

Parameter: STATic | DYNamic

Example: :LIMits:RXMeas:INITialize DYNAMIC
Initializes Rx Measurement Limits to Dynamic.

Query Response: no query

6.6.2 Rx AACH - Limit Enable

:LIMits:RXMeas:AACH:xxx:ENABle
:LIMits:RXMeas:AACH:xxx:ENABle?

Description: Set command defines Limit Value for specified Rx AACH Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Parameter: OFF | ON | 0 | 1

Default Values:

	Default	Static	Dynamic
BER:	OFF	OFF	OFF
MER:	ON	ON	OFF
PUEM:	OFF	OFF	OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:AACH:BER:ENABle ON
Enables Limits for AACH BER Rx Measurements.

Query Response: :LIMits:RXMeas:AACH:BER:ENABle?
1

6.6.3 Rx AACH - Limit Value

:LIMits:RXMeas:AACH:xxx:VALue
:LIMits:RXMeas:AACH:xxx:VALue?

Description: Set command defines Limit Value for specified Rx AACH Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**	**Class E**
Default/Static:			
BER:	4.27000%	4.88000%	4.27000%
MER:	34.16000%	46.36000%	34.16000%
PUEM:	0.06500%	0.06500%	0.06500%
Dynamic:			
BER:	4.48000%	2.46400%	5.04000%
MER:	19.04000%	12.32000%	17.92000%
PUEM:	0.06500%	0.06500%	0.06500%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:AACH:BER:VALue 5,6,7
Sets Limit Value for AACH BER Class A Rx Measurement to 5.0% and Class B Rx Measurement to 6.0% and Class E Rx Measurement to 7.0%.

Query Response: :LIMits:RXMeas:AACH:BER:VALue?
5.00000,6.00000,7.00000

6.6.4 Rx BSCH - Limit Enable

:LIMits:RXMeas:BSCH:xxx:ENABle
:LIMits:RXMeas:BSCH:xxx:ENABle?

Description: Set command Enables/Disables Limit for specified Rx BSCH Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Parameter: OFF | ON | 0 | 1

Default Values:	**Default**	**Static**	**Dynamic**
BER:	OFF	OFF	OFF
MER:	ON	ON	OFF
PUEM:	OFF	OFF	OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:BSCH:BER:ENABle ON
Enables Limits for BSCH BER Rx Measurements.

Query Response: :LIMits:RXMeas:BSCH:BER:ENABle?
1

6.6.5 Rx BSCH - Limit Value

:LIMits:RXMeas:BSCH:xxx:VALue
:LIMits:RXMeas:BSCH:xxx:VALue?

Description: Set command defines Limit Value for specified Rx BSCH Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**	**Class E**
Default/Static:			
BER:	0.36600%	0.36600%	0.36600%
MER:	3.66000%	3.66000%	3.66000%
PUEM:	0.03500%	0.03500%	0.03500%
Dynamic:			
BER:	4.48000%	2.24000%	7.16800%
MER:	12.32000%	8.96000%	24.64000%
PUEM:	0.03500%	0.03500%	0.03500%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:BSCH:BER:VALue 0.5,3.5,0.25
Sets Limit Value for BSCH BER Class A Rx Measurement to 0.5% and Class B Rx Measurement to 3.5% and Class E Rx Measurement to 0.25%.

Query Response: :LIMits:RXMeas:BSCH:BER:VALue?
0.50000,3.50000,0.25000

6.6.6 Rx SCHF - Limit Enable

:LIMits:RXMeas:SCHF:xxx:ENABle
:LIMits:RXMeas:SCHF:xxx:ENABle?

Description: Set command Enables/Disables Limit for specified Rx SCHF Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Parameter: OFF | ON | 0 | 1

Default Values:	**Default**	**Static**	**Dynamic**
BER:	OFF	OFF	OFF
MER:	ON	ON	OFF
PUEM:	OFF	OFF	OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:SCHF:BER:ENABle ON
Enables Limits for SCHF BER Rx Measurements.

Query Response: :LIMits:RXMeas:SCHF:BER:ENABle?
1

6.6.7 Rx SCHF - Limit Value

:LIMits:RXMeas:SCHF:xxx:VALue
:LIMits:RXMeas:SCHF:xxx:VALue?

Description: Set command defines Limit Value for specified Rx SCHF Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	Class A	Class B	Class E
Static:			
BER:	0.36600%	0.36600%	0.36600%
MER:	5.49000%	10.98000%	53.49000%
PUEM:	0.03500%	0.03500%	0.03500%
Dynamic:			
BER:	4.48000%	2.24000%	7.16800%
MER:	12.32000%	8.96000%	24.64000%
PUEM:	0.03500%	0.03500%	0.03500%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:SCHF:BER:VALue 0.5,10.0,0.25
Sets Limit Value for SCHF BER Class A Rx Measurement to 0.5% and Class B Rx Measurement to 10.0% and Class E Rx Measurement to 0.25%.

Query Response: :LIMits:RXMeas:SCHF:BER:VALue?
0.50000,10.00000,0.25000

6.6.8 Rx SCHHD - Limit Enable

:LIMits:RXMeas:SCHHD:xxx:ENABle
:LIMits:RXMeas:SCHHD:xxx:ENABle?

Description: Set command Enables/Disables Limit for specified Rx SCHHD Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Parameter: OFF | ON | 0 | 1

Default Values:	Default	Static	Dynamic
BER:	OFF	OFF	OFF
MER:	ON	ON	OFF
PUEM:	OFF	OFF	OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:SCHHD:BER:ENABle ON
Enables Limits for SCHHD BER Rx Measurements.

Query Response: :LIMits:RXMeas:SCHHD:BER:ENABle?
1

6.6.9 Rx SCHHD - Limit Value

:LIMits:RXMeas:SCHHD:xxx:VALue
:LIMits:RXMeas:SCHHD:xxx:VALue?

Description: Set command defines Limit Value for specified Rx SCHHD Measurement.
Query command returns parameter setting.

Burst Type (xxx): BER | MER | PUEM

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	Class A	Class B	Class E
Static:			
BER:	0.36600%	0.36600%	0.36600%
MER:	3.05000%	6.10000%	3.05000%
PUEM:	0.03500%	0.03500%	0.03500%
Dynamic:			
BER:	4.48000%	2.24000%	7.16800%
MER:	12.32000%	8.96000%	23.52000%
PUEM:	0.03500%	0.03500%	0.03500%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:SCHHD:BER:VALue 0.5,7.0,0.25
Sets Limit Value for SCHHD BER Class A Rx Measurement to 0.5% and Class B Rx Measurement to 7.0% and Class E Rx Measurement to 0.25%.

Query Response: :LIMits:RXMeas:SCHHD:BER:VALue?
0.50000,7.00000,0.25000

6.6.10 Rx TCH/2.4 BER - Limit Enable

:LIMits:RXMeas:TCH2:BER:ENABle
:LIMits:RXMeas:TCH2:BER:ENABle?

Description: Set command Enables/Disables Limit for specified Rx TCH/2.4 BER Measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Static: ON

Dynamic: OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:TCH2:BER:ENABle ON
Enables Limits for TCH/2.4 BER Rx Measurements.

Query Response: :LIMits:RXMeas:TCH2:BER:ENABle?
1

6.6.11 Rx TCH/2.4 BER - Limit Value

:LIMits:RXMeas:TCH2:BER:VALue
:LIMits:RXMeas:TCH2:BER:VALue?

Description: Set command defines Limit Value for specified Rx TCH/2.4 Measurement.
Query command returns parameter setting.

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**	**Class E**
Default/Static:	0.01220%	0.01220%	0.01220%
Dynamic:	1.23200%	0.39200%	0.91840%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:TCH2:BER:VALue 0.025,0.035,0.25
Sets Limit Value for TCH/2.4 BER Class A Rx Measurement to 0.025% and Class B Rx Measurement to 0.035% and Class E Rx Measurement to 0.25%.

Query Response: :LIMits:RXMeas:TCH2:BER:VALue?
0.02500,0.03500,0.25000

6.6.12 Rx TCH/4.8 BER - Limit Enable

:LIMits:RXMeas:TCH4:BER:ENABle
:LIMits:RXMeas:TCH4:BER:ENABle?

Description: Set command Enables/Disables Limit for specified Rx TCH/4.8 BER Measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Static: ON

Dynamic: OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:TCH4:BER:ENABle ON
Enables Limits for TCH/4.8 BER Rx Measurements.

Query Response: :LIMits:RXMeas:TCH4:BER:ENABle?
1

6.6.13 Rx TCH/4.8 BER - Limit Value

:LIMits:RXMeas:TCH4:BER:VALue
:LIMits:RXMeas:TCH4:BER:VALue?

Description: Set command defines Limit Value for specified Rx TCH/4.8 Measurement.
Query command returns parameter setting.

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**	**Class E**
Default/Static:	0.36600%	0.36600%	0.36600%
Dynamic:	4.48000%	2.24000%	7.16800%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:TCH4:BER:VALue 0.025,0.035,0.25
Sets Limit Value for TCH/4.8 BER Class A Rx Measurement to 0.025% and Class B Rx Measurement to 0.035% and Class E Rx Measurement to 0.25%.

Query Response: :LIMits:RXMeas:TCH4:BER:VALue?
0.02500,0.03500,0.25000

6.6.14 Rx TCH/7.2 BER - Limit Enable

:LIMits:RXMeas:TCH7:BER:ENABle
:LIMits:RXMeas:TCH7:BER:ENABle?

Description: Set command Enables/Disables Limit for specified Rx TCH/7.2 BER Measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Static: ON

Dynamic: OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:TCH7:BER:ENABle ON
Enables Limits for TCH/7.2 BER Rx Measurements.

Query Response: :LIMits:RXMeas:TCH7:BER:ENABle?
1

6.6.15 Rx TCH/7.2 - Limit Value

:LIMits:RXMeas:TCH7:BER:VALue
:LIMits:RXMeas:TCH7:BER:VALue?

Description: Set command defines Limit Value for specified Rx TCH/7.2 Measurement. Query command returns parameter setting.

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**	**Class E**
Default/Static:	4.27000%	4.88000%	4.27000%
Dynamic:	4.48000%	2.46400%	5.04000%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:TCH7:BER:VALue 4.5,5.0,4.5
Sets Limit Value for TCH/7.2 BER Class A Rx Measurement to 4.5% and Class B Rx Measurement to 5.0% and Class E Rx Measurement to 4.5%.

Query Response: :LIMits:RXMeas:TCH7:BER:VALue?
4.50000,5.00000,4.50000

6.6.16 Rx TCHS - Limit Enable

:LIMits:RXMeas:TCHS:xxx:ENABle
:LIMits:RXMeas:TCHS:xxx:ENABle?

Description: Set command Enables/Disables Limit for specified Rx TCHS Measurement. Query command returns parameter setting.

Burst Type (xxx): BER0 | BER1 | BER2 | MER | PUEM

Parameter: OFF | ON | 0 | 1

Default Values:	**Default**	**Static**	**Dynamic**
BER0:	ON	ON	OFF
BER1:	ON	ON	OFF
BER2:	OFF	OFF	OFF
MER:	ON	ON	OFF
PUEM:	OFF	OFF	OFF

Set/Query Format: Boolean

Example: :LIMits:RXMeas:TCHS:BER:ENABle ON
Enables Limits for TCHS BER Rx Measurements.

Query Response: :LIMits:RXMeas:TCHS:BER:ENABle?
1

6.6.17 Rx TCHS - Limit Value

:LIMits:RXMeas:TCHS:xxx:VALue
:LIMits:RXMeas:TCHS:xxx:VALue?

Description: Set command defines Limit Value for specified Rx TCHS Measurement. Query command returns parameter setting.

Burst Type (xxx): BER0 | BER1 | BER2 | MER | PUEM

Range: 0.00001 to 99.99999%

Units: % (percent)

Default Values:	**Class A**	**Class B**	**Class E**
Default/Static:			
BER0:	4.27000%	4.88000%	4.27000%
BER1:	0.23000%	0.23000%	0.23000%
BER2:	0.23000%	0.23000%	0.23000%
MER:	0.04500%	0.04500%	0.04500%
PUEM:	0.02800%	0.02800%	0.02800%
Dynamic:			
BER0:	4.25600%	2.46400%	11.53600%
BER1:	1.90400%	1.79200%	10.52800%
BER2:	1.90400%	1.79200%	10.52800%
MER:	2.90000%	2.50000%	7.60000%
PUEM:	0.02800%	0.02800%	0.02800%

Data Format: <Class A limit>,<Class B limit>,<Class E limit>

Set/Query Format: data string (NRf values) | data string (NR2 values)

Example: :LIMits:RXMeas:TCHS:BER:VALue 4.5,5.0,4.5
Sets Limit Value for TCHS BER Class A Rx Measurement to 4.5% and Class B Rx Measurement to 5.0% and Class E Rx Measurement to 4.5%.

Query Response: :LIMits:RXMeas:TCHS:BER:VALue?
4.50000,5.00000,4.50000

6.7 SYSTEM ID & ACCESS PARAMETERS CONFIGURATION

6.7.1 System ID & Access - Access Parameter

:CONFigure:ACCess:APARameter
:CONFigure:ACCess:APARameter?

Description: Set command defines defines System Access Parameter.
Query command returns parameter setting.

Parameter: -53.0 to -23.0 dBm, 2 dB steps

Units: dBm

Default Value: -45.0 dBm

Set/Query Format: NRF | NR1

Example: :CONFigure:ACCess:APARameter -35dBm
Sets System Access Parameter to -35.0 dBm.

Query Response: :CONFigure:ACCess:APARameter?
-35

6.7.2 System ID & Access - Maximum Tx Level

:CONFigure:ACCess:MAXTx
:CONFigure:ACCess:MAXTx?

Description: Set command defines defines System Maximum Tx Level.
Query command returns parameter setting.

Parameter: +15.0 to +45.0 dBm, 5 dB steps

Units: dBm

Default Value: 30.0 dBm

Set/Query Format: NRF | NR1

Example: :CONFigure:ACCess:MAXTx 20dBm
Sets System Maximum Tx Level to 20.0 dBm.

Query Response: :CONFigure:ACCess:MAXTx?
20

6.7.3 System ID & Access - Minimum Rx Level

:CONFigure:ACCess:MINRx
:CONFigure:ACCess:MINRx?

Description: Set command defines defines System Minimum Rx Level.
Query command returns parameter setting.

Parameter: -125.0 to -50.0 dBm, 5 dB steps

Units: dBm

Default Value: -125.0 dBm

Set/Query Format: NRF | NR1

Example: :CONFigure:ACCess:MAXTx -100dBm
Sets System Minimum Rx Level to -100.0 dBm.

Query Response: :CONFigure:ACCess:MAXTx?
-100

6.7.4 System ID & Access Parameters - Base Station Color Code

:CONFigure:BSIDentity:BCC
:CONFigure:BSIDentity:BCC?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.
Range: 0 to 63
Default Value: 1
Set/Query Format: NR1
Example: :CONFigure:BSIDentity:BCC 50
Sets Base Station Color Code to 50.
Query Response: :CONFigure:BSIDentity:BCC?
50

6.7.5 System ID & Access Parameters - Base Station Mobile Country Code

:CONFigure:BSIDentity:MCC
:CONFigure:BSIDentity:MCC?

Description: Set command defines Base Station Mobile Country Code.
Query command returns parameter setting.
Range: 0 to 999
Default Value: 1 (Test)
Set/Query Format: NR1
Example: :CONFigure:BSIDentity:MCC
Sets Base Station Mobile Country Code to 234 (United Kingdom).
Query Response: :CONFigure:BSIDentity:MCC?
234

6.7.6 System ID & Access Parameters - Base Station Mobile Network Code

:CONFigure:BSIDentity:MNC
:CONFigure:BSIDentity:MNC?

Description: Set command defines Base Station Mobile Country Code.
Query command returns parameter setting.
Range: 0 to 16383
Default Value: 1
Set/Query Format: NR1
Example: :CONFigure:BSIDentity:MNC
Sets Base Station Mobile Network Code to 1234.
Query Response: :CONFigure:BSIDentity:MNC?
1234

6.8 TX MEASUREMENTS LIMITS CONFIGURATION

6.8.1 Tx Measurements - Initialize Limits

:LIMits:TXMeas:INITialize:CONTrol
:LIMits:TXMeas:INITialize:NORMal

Description: Set command Initializes Tx Measurement Limits as Normal or Extreme.

Parameter: NORMal | EXTReme

Example: :LIMits:TXMeas:INITialize:NORMAL EXTREME
Initializes Tx Measurement Limits to Extreme for Normal burst.

Query Response: no query

6.8.2 Tx Burst Power - Limit Enable

:LIMits:TXMeas:POWer:ENABle:xxx
:LIMits:TXMeas:POWer:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal | CW

Example: :LIMits:TXMeas:POWer:ENABle:NORMal ON
Enables Limit for Normal burst Tx Burst Power Measurements.

Query Response: :LIMits:TXMeas:POWer:ENABle:NORMal?
1

6.8.3 Tx Burst Power - Limit Value

:LIMits:TXMeas:POWer:VALue:xxx
:LIMits:TXMeas:POWer:VALue:xxx?

Description: Set command defines Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Range: -9.9 to +9.9 dB

Units: dB

Default Values:

Default/Normal:

Highest Power Level Upper: +2.0 dB
Highest Power Level Lower: -2.0 dB
Other Power Level Upper: +2.5 dB
Other Power Level Lower: -2.5 dB

Extreme:

Highest Power Level Upper: +3.0 dB
Highest Power Level Lower: -4.0 dB
Other Power Level Upper: +4.0 dB
Other Power Level Lower: -4.0dB

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal | CW

Example: :LIMits:TXMeas:POWer:VALue:NORMal 3,-3,5,-5
Sets Limit for Normal Tx Burst Power Measurements to the following:

Highest Power Level Upper: +3.0 dB
Highest Power Level Lower: -3.0 dB
Other Power Level Upper: +5.0 dB
Other Power Level Lower: -5.0 dB

Query Response: :LIMits:TXMeas:POWer:VALue:NORMal?
3.0,-3.0,5.0,-5.0

6.8.4 Tx Burst Timing - Limit Enable

:LIMits:TXMeas:BTIMing:ENABle:xxx
:LIMits:TXMeas:BTIMing:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Burst Timing Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:BTIMing:ENABle:NORMal ON
Enables Limit for Normal burst Tx Burst Timing Measurements.

Query Response: :LIMits:TXMeas:BTIMing:ENABle:NORMal?
1

6.8.5 Tx Burst Timing - Limit Value

:LIMits:TXMeas:BTIMing:VALue:xxx
:LIMits:TXMeas:BTIMing:VALue:xxx?

Description: Set command defines Limit for Tx Burst Timing Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.01 to 9.99 symbols

Units: symbols

Default Values:

Default/Normal: 0.25 symbols

Extreme: 0.25 symbols

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:BTIMing:VALue:NORMal 1
Sets Limit for Normal burst Tx Burst Timing Measurements to 1 symbol.

Query Response: :LIMits:TXMeas:BTIMing:VALue:NORMal?
1

6.8.6 Tx Frequency Error - Limit Enable

:LIMits:TXMeas:FERRor:ENABle:xxx
:LIMits:TXMeas:FERRor:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal | CW

Example: :LIMits:TXMeas:FERRor:ENABle:NORMal ON
Enables Limit for Normal burst Tx Frequency Error Measurements.

Query Response: :LIMits:TXMeas:FERRor:ENABle:NORMal?
1

6.8.7 Tx Frequency Error - Limit Value

:LIMits:TXMeas:FERRor:VALue:xxx
:LIMits:TXMeas:FERRor:VALue:xxx?

Description: Set command defines Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 1500.0 Hz

Units: Hz

Default Values:

Default/Normal: 100.0 Hz

Extreme: 100.0 Hz

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal | CW

Example: :LIMits:TXMeas:FERRor:VALue:NORMal 150Hz
Sets Limit for Normal burst Tx Frequency Error Measurements to 150.0 Hz.

Query Response: :LIMits:TXMeas:FERRor:VALue:NORMal?
150.0

6.8.8 Tx Profile Power - Limit Enable

:LIMits:TXMeas:PROFile:ENABle:xxx
:LIMits:TXMeas:PROFile:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Profile Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:PROFile:ENABle:NORMal ON
Enables Limit for Normal burst Tx Profile Power Measurements.

Query Response: :LIMits:TXMeas:PROFile:ENABle:NORMal?
1

6.8.9 Tx Power Profile - Limit Value

:LIMits:TXMeas:PROFile:VALue:xxx
:LIMits:TXMeas:PROFile:VALue:xxx?

Description: Set command defines Limit for Tx Power Profile Measurements for specified burst type.
Query command returns parameter setting.

Range:

Low dBc Leading/Trailing: 0.0 to +9.9 dBc
Low dBm Leading/Trailing: 0.0 to +9.9 dBc
High dBc Leading: -9.9 to +9.9 dBc
High dBc Trailing: -9.9 to +9.9 dBc

Units: dBc | dBm

Default Values:

Default/Normal:

Low dBc Leading/Trailing: -70.0 dBc
Low dBm Leading/Trailing: -36.0 dBm
High dBc Leading: +6.0 dBc
High dBc Trailing: +3.0 dBm

Extreme:

Low dBc Leading/Trailing: -70.0 dBc
Low dBm Leading/Trailing: -36.0 dBm
High dBc Leading: +6.0 dBc
High dBc Trailing: +3.0 dBm

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:PROFile:VALue:NORMal -50,-20,5,5
Sets Limits for Normal Tx Power Profile burst Measurements to the following:

Low dBc Leading/Trailing: -50.0 dBc
Low dBm Leading/Trailing: -20.0 dBm
High dBc Leading: +5.0 dBc
High dBc Trailing: +2.0 dBm

Query Response: :LIMits:TXMeas:PROFile:VALue:NORMal?
-50.0,-20.0,5.0,2.0

6.8.10 Tx Residual Carrier - Limit Enable

:LIMits:TXMeas:RCARRier:ENABle:xxx
:LIMits:TXMeas:RCARRier:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:RCARRier:ENABle:NORMal ON
Enables Limit for Normal burst Tx Residual Carrier Measurements.

Query Response: :LIMits:TXMeas:RCARRier:ENABle:NORMal?
1

6.8.11 Tx Residual Carrier - Limit Value

:LIMits:TXMeas:RCARrier:VALue:xxx
:LIMits:TXMeas:RCARrier:VALue:xxx?

Description: Set command defines Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 5.0%

Extreme: 5.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:RCARrier:VALue:NORMal 10.0
Sets Limit Value for Normal Tx Residual Carrier Burst Measurements to 10.0%.

Query Response: :LIMits:TXMeas:RCARrier:VALue:NORMal?
10.0

6.8.12 Tx Vector Peak - Limit Enable

:LIMits:TXMeas:VPEak:ENABle:xxx
:LIMits:TXMeas:VPEak:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VPEak:ENABle:NORMal ON
Enables Limit for Normal burst Tx Vector Peak Measurements.

Query Response: :LIMits:TXMeas:VPEak:ENABle:NORMal?
1

6.8.13 Tx Vector Peak - Limit Value

:LIMits:TXMeas:VPEak:VALue:xxx
:LIMits:TXMeas:VPEak:VALue:xxx?

Description: Set command defines Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 30.0%

Extreme: 30.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VPEak:VALue:NORMal 15.0
Sets Limit for Normal Tx Vector Peak Burst Measurements to 15.0%.

Query Response: :LIMits:TXMeas:VPEak:VALue:NORMal?
15.0

6.8.14 Tx Vector RMS - Limit Enable

:LIMits:TXMeas:VRMS:ENABle:xxx
:LIMits:TXMeas:VRMS:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector RMS Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VRMS:ENABle:NORMal ON
Enables Limit for Normal burst Tx Vector RMS Measurements.

Query Response: :LIMits:TXMeas:VRMS:ENABle:NORMal?
1

6.8.15 Tx Vector RMS - Limit Value

:LIMits:TXMeas:VRMS:VALue:xxx
:LIMits:TXMeas:VRMS:VALue:xxx?

Description: Set command defines Limit for Tx Vector RMS Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Value:

Default/Normal: 10.0%

Extreme: 10.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal

Example: :LIMits:TXMeas:VRMS:VALue:NORMal 15.0
Sets Limit for Normal Tx Vector RMS Burst Measurements to 15.0%.

Query Response: :LIMits:TXMeas:VRMS:VALue:NORMal?
15.0

6.9 CONTROL

6.9.1 Duplex Spacing - Mode of Operation

:RF:DUPLex:LOCK
:RF:DUPLex:LOCK?

Description: Set command defines Duplex Mode of Operation.
Query command returns parameter setting.

Parameter: UNLocked | LOCKed

Default Value: LOCKED

Set/Query Format: CPD | CRD

Example: :RF:DUPLex:LOCK UNLOCKED
Sets Duplex Mode of Operation to Unlocked.

Query Response: :RF:DUPLex:LOCK?
UNL

NOTE Command is only valid when No Plan is selected as the Channel Plan.

6.9.2 Duplex Spacing - Offset Value

:RF:DUPLex:SPACing
:RF:DUPLex:SPACing?

Description: Set command defines the RF Duplex Spacing.
Query command returns parameter setting.

Range: -999.0 to +999.0 MHz

Units: Hz | kHz | MHz | GHz

Default Value: 10.0 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:DUPLex:SPACing 15MHz
Sets Duplex Spacing to 15.0 MHz.

Query Response: :RF:DUPLex:SPACing?
15000000

6.9.3 Protocol - Loopback Mode

:PROTocol:LOOPback
:PROTocol:LOOPback?

Description: Set command Enables\Disables Loopback mode.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :PROTocol:LOOPback ON
Enables Loopback mode

Query Response: :PROTocol:LOOPback?
1

6.9.4 Protocol - Mobile Tx Control

:PROTocol:MTXC
:PROTocol:MTXC?

Description: Set command defined Mobile Tx Control mode of operation.
Query command returns parameter setting.

Parameter: OFF | NORMal | CONTrol

Default Value: OFF

Set/Query Format: CPD | CRD

Example: :PROTocol:MTXC NORMAL
Enables Mobile Tx Control to Normal mode of operation.

Query Response: :PROTocol:MTXC?
NORM

6.9.5 Protocol - T1 Type

:PROTocol:TTYPE
:PROTocol:TYYPE?

Description: Set command defines T1 Type.
Query command returns parameter setting.

Parameter: BSCH | SCHF | TCH2 |TCH4 | TCH7 | TCHS

Default Value: TCH7 (TCH/7.2)

Set/Query Format: CPD | CRD

Example: :PROTocol:TTYPE TCHS
Sets T1 Type to TCHS.

Query Response: :PROTocol:TTYPE?
TCHS

6.9.6 RF Analyzer - Expected Receive Power Level

:RF:ANALyzer:LEVel:EVALue
:RF:ANALyzer:LEVel:EVALue?

Description: Set command defines Expected Power Level.
Query command returns parameter setting.

Range: **Pre-Amp OFF**
T/R: -40.0 to +55.0 dBm in 5 dB steps
ANT: -80.0 to 0.0 dBm in 5 dB steps

Range: **Pre-Amp ON**
T/R: -50.0 to +45.0 dBm in 5 dB steps
ANT: -100.0 to -20.0 dBm in 5 dB steps

Units: dBm

Default Value: 40.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:ANALyzer:LEVel:EVALue 45dBm
Sets Expected Power Level to 45.0 dBm/30.0 W.

Query Response: :RF:ANALyzer:LEVel:EVALue?
45.0

NOTE
Only if CMode is defined as EXPected.
Command not valid when participating in a call.

6.9.7 RF Analyzer - Input Connector

:RF:ANALyzer:PORT
:RF:ANALyzer:PORT?

Description: Set command selects the RF Input Connector.
Query command returns parameter setting.

Parameter: TR | ANT

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:PORT ANT
Selects Antenna Connector as RF Input Connector.

Query Response: :RF:ANALyzer:PORT?
ANT

NOTE
Refer to 3900 Platform Specifications for maximum input values.

6.9.8 RF Analyzer - Level Control Mode

:RF:ANALyzer:LEVel:CMODe
:RF:ANALyzer:LEVel:CMODe?

Description: Set command defines Level Control mode.
Query command returns parameter setting.

Parameter: EXPected | OPEN

Default Value: Expected (In Call)
Open Loop (Not In Call)

Set/Query Format: Boolean

Example: :RF:ANALyzer:LEVel:CMODe EXPECTED
Sets Level Control Mode to Expected.

Query Response: :RF:ANALyzer:LEVel:CMODe?
EXP

6.9.9 RF Analyzer - Receiver Automatic Gain Control

:RF:ANALyzer:AGC
:RF:ANALyzer:AGC?

Description: Set command Enables/Disables the AGC mode of operation.
Query command returns the On/Off state of AGC mode.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:ANALyzer:AGC OFF
Disables Automatic Gain Control.

Query Response: :RF:ANALyzer:AGC?
0

6.9.10 RF Analyzer - Receive Frequency

:RF:ANALyzer:FREQuency
:RF:ANALyzer:FREQuency?

Description: Set command defines the RF Analyzer Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units : Hz | kHz | MHz | GHz

Default Value: 380.0 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:ANALyzer:FREQuency 390 MHz
Sets RF Analyzer Frequency to 390.0 MHz.

Query Response: :RF:ANALyzer:FREQuency?
390000000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

6.9.11 RF Analyzer - Receiver Pre-Amplifier

:RF:ANALyzer:RECeiver:AMP
:RF:ANALyzer:RECeiver:AMP?

Description: Set command Enables/Disables Receiver Pre-Amplifier.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :RF:ANALyzer:RECeiver:AMP ON
Enables Receiver Pre-Amplifier.

Query Response: :RF:ANALyzer:RECeiver:AMP?
1

6.9.12 RF Analyzer - RF Control Channel

:RF:CHANnel
:RF:CHANnel?

Description: Set command defines RF Control Channel.
Query command returns parameter setting.

Range: defined by selected Channel Plan

Default Value defined by selected Channel Plan

Set/Query Format: NR1

Example: :RF:CHANnel 3900
Sets RF Control Channel to 3900.

Query Response: :RF:CHANnel?
3900

6.9.13 RF Generator - Enable

:RF:GENerator:STATe
:RF:GENerator:STATe?

Description: Set command Enables/Disables RF Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:STATe ON
Enables RF Generator.

Query Response: :RF:GENerator:STATe?
1

6.9.14 RF Generator - Frequency

:RF:GENerator:FREQuency
:RF:GENerator:FREQuency?

Description: Set command defines RF Generator Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units: Hz | kHz | MHz | GHz

Default Value: 390.00 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:GENerator:FREQuency 400MHz
Sets RF Generator Frequency to 400.0 MHz.

Query Response: :RF:GENerator:FREQuency?
400000000

6.9.15 RF Generator - Level

:RF:GENerator:LEVel
:RF:GENerator:LEVel?

Description: Set command defines RF Generator Level.
Query command returns parameter setting.

Range: **TR:** -130.0 to -40.0 dBm
GEN: -130.0 to 0.0 dBm

Units: dBm

Default Value: -100.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:GENerator:LEVel -40dBm
Sets RF Generator Level to -40.0 dBm.

Query Response: :RF:GENerator:LEVel?
-40.0

6.9.16 RF Generator - Modulator Enable

:RF:GENerator:MODulator
:RF:GENerator:MODulator?

Description: Set command Enables/Disables Modulation Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 1 | 0

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:MODulator ON
Enables Modulation Generator.

Query Response: :RF:GENerator:MODulator?
1

6.9.17 RF Generator - Output Connector

:RF:GENerator:PORT
:RF:GENerator:PORT?

Description: Set command selects the RF Out connector.
Query command returns parameter setting.

Parameter: TR | GEN

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:GENerator:PORT GEN
Selects Generator Connector as RF Output Connector.

Query Response: :RF:GENerator:PORT?
GEN

6.9.18 RF Generator - Timing Delay

:RF:TIMing:DELay

Description: Command delays Timing by one symbol.

Parameter/Query: none

6.10 MODULATION ACCURACY - MAGNITUDE ERROR

6.10.1 Magnitude Error - Burst Data at Symbol Point

:FETCh:MACCuracy:MERRor:xxx? p

Description: Command returns Magnitude Error measurement for Control or Normal Bursts at symbol point.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: 0 to 103 (NR1)
Normal Burst symbol range: 0 to 231 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:MERRor:NORMal? 50
0,-4.60

NOTE Statusbyte may return more than one condition as a bitmask.

6.10.2 Magnitude Error - Symbol Range

:FETCh:MACCuracy:MERRor:RANGe:xxx?

Description: Command returns Magnitude Error Symbol Range for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:MERRor:RANGe:CONTrol? 50
0,-24,79

NOTE Statusbyte may return more than one condition as a bitmask.

6.11 MODULATION ACCURACY - PHASE ERROR TEST TILE

6.11.1 Phase Error - Burst Data at Symbol Point

:FETCh:MACCuracy:PERRor:xxx? p

Description: Command returns Phase Error measurement for Control or Normal Bursts at symbol point.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: 0 to 103 (NR1)
Normal Burst symbol range: 0 to 231 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): degree

Query Response: :FETCh:MACCuracy:PERRor:NORMal? 50
0,3.13

NOTE Statusbyte may return more than one condition as a bitmask.

6.11.2 Phase Error - Symbol Range

:FETCh:MACCuracy:PERRor:RANGe:CONTrol?
:FETCh:MACCuracy:PERRor:RANGe:NORMal?

Description: Command returns Phase Error Symbol Range Control or Normal Bursts.

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:PERRor:RANGe:CONTrol?
0,-24,79

NOTE Statusbyte may return more than one condition as a bitmask.

6.12 MODULATION ACCURACY - VECTOR ERROR TEST TILE

6.12.1 Vector Error - Burst Data at Symbol Point

:FETCh:MACCuracy:VERRor:xxx? p

Description: Command returns Vector Error measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: 0 to 103 (NR1)
Normal Burst symbol range: 0 to 231 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:VERRor:CONTrol? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

6.12.2 Vector Error - Symbol Range

:FETCh:MACCuracy:VERRor:RANGe:xxx?

Description: Command returns Vector Error Symbol Range for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:VERRor:RANGe:CONTrol?
0,-24,79

NOTE Statusbyte may return more than one condition as a bitmask.

6.13 POWER PROFILE FRAME

6.13.1 Power Profile Frame - Measurement Query

:FETCh:PFRame:xxx?

Description: Command returns Tx Power for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<sample count>,<avg>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

avg (NR2): dBm

Query Response: :FETCh:PFRame:NORmal?
0,20,28.5

NOTE Statusbyte may return more than one condition as a bitmask.

6.13.2 Power Profile Frame - Burst Data at Symbol Point

:FETCh:PFRame:SYMBol:xxx? p

Description: Command returns Profile for Control or Normal Bursts at symbol point.

Burst Type (xxx): CONTrol | NORMal

Parameter: symbol range: -27 to +1038 (NR1)

Query Data: <statusbyte>,<sample count>,<avg>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

avg (NR2): dBc

Query Response: :FETCh:PFRame:SYMBol:NORmal? 50
0,20,-76.01

NOTE Statusbyte may return more than one condition as a bitmask.

6.13.3 Power Profile Frame - Symbol Range

:FETCh:PFRame:SYMBol:RANGe:xxx?

Description: Command returns Symbol Range for Control or Normal Bursts

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

min, max (NR1): value

Query Response: :FETCh:PFRame:SYMBol:RANGe:CONTrol?
0,-27,1038

NOTE Statusbyte may return more than one condition as a bitmask.

6.14 POWER PROFILE FULL

6.14.1 Power - Control Burst Measurement at Symbol Point

:FETCh:POWer:SYMBol:xxx? p

Description: Command returns Profile at a Symbol for Control Bursts.

Burst Type (xxx): CONTrol | NORMal

Parameter: Control Burst symbol range: -24 to 127 (NR1)
Normal Burst symbol range: -35 to 265 (NR1)

Query Data: <statusbyte>,<sample count>,<power>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

power (NR2): dBc

Query Response: :FETCh:POWer:SYMBol:CONTrol? 50
1,0,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

6.14.2 Power - Symbol Range

:FETCh:POWer:SYMBol:RANGe:CONTrol?
:FETCh:POWer:SYMBol:RANGe:NORMal?

Description: Command returns Symbol range for Normal or Control Bursts.

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

min, max (NR1): symbol

Query Response: :FETCh:POWer:SYMBol:RANGe:CONTrol?
0,-24,126

NOTE Statusbyte may return more than one condition as a bitmask.

6.15 RX MEASUREMENTS TEST TILE

6.15.1 Rx Measurements - Continuous Sweep

:INITiate:CONTinuous:RXMeas
:INITiate:CONTinuous:RXMeas?

Description: Set command initiates Continuous Rx Measurement sweeps.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Set/Query FormatL Boolean

Default Value: ON

Example: :INITiate:CONTinuous:RXMeas ON
Enables continuous Rx Measurement sweeps.

Query Response: :INITiate:CONTinuous:RXMeas?
1

6.15.2 Rx Measurements - Single Sweep

:INITiate:IMMediate:RXMeas

Description: Command initiates Single Rx Measurements.

Parameter/Query: none

6.15.3 Rx Measurements - Stop Measurements

:ABORt:RXMeas

Description: Command stops Rx Measurements.

Parameter/Query: none

6.15.4 AACH BER - Measurement Query

:FETCh:RXMeas:AACH:BER?

Description: Command returns BER measurement for AACH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:AACH:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.5 AACH BER - Sample Count

:CONFigure:RXMeas:SAMPle:AACH:BER
:CONFigure:RXMeas:SAMPle:AACH:BER?

Description: Set command defines the number of samples used to calculate AACH BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 350,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:AACH:BER 250000
Sets the number of samples used to calculate AACH BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:AACH:BER?
250000

6.15.6 AACH MER - Measurement Query

:FETCh:RXMeas:AACH:MER?

Description: Command returns MER measurement for AACH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<MER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

MER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:AACH:MER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.7 AACH MER - Sample Count

:CONFigure:RXMeas:SAMPle:AACH:MER
:CONFigure:RXMeas:SAMPle:AACH:MER?

Description: Set command defines the number of samples used to calculate AACH MER Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 6600

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:AACH:MER 250000
Sets the number of samples used to calculate AACH MER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:AACH:MER?
250000

6.15.8 AACH PUEM - Measurement Query

:FETCh:RXMeas:AACH:PUEM?

Description: Command returns PUEM measurement for AACH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<PUEM%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

PUEM (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:AACH:PUEM?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.9 AACH PUEM - Sample Count

:CONFigure:RXMeas:SAMPle:AACH:PUEM
:CONFigure:RXMeas:SAMPle:AACH:PUEM?

Description: Set command defines the number of samples used to calculate AACH PUEM Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 31200

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:AACH:PUEM 250000
Sets the number of samples used to calculate AACH PUEM Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:AACH:PUEM?
250000

6.15.10 BSCH BER - Measurement Query

:FETCh:RXMeas:BSCH:BER?

Description: Command returns BER measurement for BSCH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:BSCH:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.11 BSCH BER - Sample Count

:CONFigure:RXMeas:SAMPle:BSCH:BER
:CONFigure:RXMeas:SAMPle:BSCH:BER?

Description: Set command defines the number of samples used to calculate BSCH BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 1,500,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:BSCH:BER 250000
Sets the number of samples used to calculate BSCH BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:BSCH:BER?
250000

6.15.12 BSCH MER - Measurement Query

:FETCh:RXMeas:BSCH:MER?

Description: Command returns MER measurement for BSCH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<MER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

MER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:BSCH:MER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.13 BSCH MER - Sample Count

:CONFigure:RXMeas:SAMPle:BSCH:MER
:CONFigure:RXMeas:SAMPle:BSCH:MER?

Description: Set command defines the number of samples used to calculate BSCH MER Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 4800

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:BSCH:MER 250000
Sets the number of samples used to calculate BSCH MER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:BSCH:MER?
250000

6.15.14 BSCH PUEM - Measurement Query

:FETCh:RXMeas:BSCH:PUEM?

Description: Command returns PUEM measurement for BSCH burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<PUEM%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

PUEM (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:BSCH:PUEM?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.15 BSCH PUEM - Sample Count

:CONFigure:RXMeas:SAMPle:BSCH:PUEM
:CONFigure:RXMeas:SAMPle:BSCH:PUEM?

Description: Set command defines the number of samples used to calculate BSCH PUEM Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 31200

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:BSCH:PUEM 250000
Sets the number of samples used to calculate BSCH PUEM Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:BSCH:PUEM?
250000

6.15.16 SCHF BER - Measurement Query

:FETCh:RXMeas:SCHF:BER?

Description: Command returns BER measurement for SCHF burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHF:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.17 SCHF BER Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:SCHF:BER
:CONFigure:RXMeas:SAMPle:SCHF:BER?

Description: Set command defines the number of samples used to calculate SCHF BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 6,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHF:BER 250000
Sets the number of samples used to calculate SCHF BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHF:BER?
250000

6.15.18 SCHF MER - Measurement Query

:FETCh:RXMeas:SCHF:MER?

Description: Command returns MER measurement for SCHF burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<MER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

MER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHF:MER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.19 SCHF MER Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:SCHF:MER
:CONFigure:RXMeas:SAMPle:SCHF:MER?

Description: Set command defines the number of samples used to calculate SCHF MER Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 6600

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHF:MER 250000
Sets the number of samples used to calculate SCHF MER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHF:MER?
250000

6.15.20 SCHF PUEM - Measurement Query

:FETCh:RXMeas:SCHF:PUEM?

Description: Command returns PUEM measurement for SCHF burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<PUEM%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

PUEM (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHF:PUEM?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.21 SCHF PUEM Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:SCHF:PUEM
:CONFigure:RXMeas:SAMPle:SCHF:PUEM?

Description: Set command defines the number of samples used to calculate SCHF PUEM Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 31200

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHF:PUEM 250000
Sets the number of samples used to calculate SCHF PUEM Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHF:PUEM?
250000

6.15.22 SCHHD BER - Measurement Query

:FETCh:RXMeas:SCHHD:BER?

Description: Command returns BER measurement for SCHHD burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHHD:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.23 SCHHD BER Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:SCHHD:BER
:CONFigure:RXMeas:SAMPle:SCHHD:BER?

Description: Set command defines the number of samples used to calculate SCHHD BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 3,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHHD:BER 250000
Sets the number of samples used to calculate SCHHD BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHHD:BER?
250000

6.15.24 SCHHD MER - Measurement Query

:FETCh:RXMeas:SCHHD:MER?

Description: Command returns MER measurement for SCHHD burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<MER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

MER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHHD:MER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.25 SCHHD MER Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:SCHHD:MER
:CONFigure:RXMeas:SAMPle:SCHHD:MER?

Description: Set command defines the number of samples used to calculate SCHHD MER Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 4800

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHHD:MER 250000
Sets the number of samples used to calculate SCHHD MER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHHD:MER?
250000

6.15.26 SCHHD PUEM - Measurement Query

:FETCh:RXMeas:SCHHD:PUEM?

Description: Command returns PUEM measurement for SCHHD burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<PUEM%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

PUEM (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:SCHHD:PUEM?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.27 SCHHD PUEM Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:SCHHD:PUEM
:CONFigure:RXMeas:SAMPle:SCHHD:PUEM?

Description: Set command defines the number of samples used to calculate SCHHD PUEM Measurements.
Query command returns parameter setting.

Range: 10 to 1,000,000

Default Value: 31200

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:SCHHD:PUEM 250000
Sets the number of samples used to calculate SCHHD PUEM Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:SCHHD:PUEM?
250000

6.15.28 TCH/2.4 BER - Measurement Query

:FETCh:RXMeas:TCH2:BER?

Description: Command returns BER measurement for TCH/2.4 burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCH2:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.29 TCH/2.4 BER Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:TCH2:BER
:CONFigure:RXMeas:SAMPle:TCH2:BER?

Description: Set command defines the number of samples used to calculate TCH/2.4 BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 3,500,000

Default Value: 1290000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:TCH2:BER 250000
Sets the number of samples used to calculate TCH/2.4 BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:TCH2:BER?
250000

6.15.30 TCH/4.8 BER - Measurement Query

:FETCh:RXMeas:TCH4:BER?

Description: Command returns BER measurement for TCH/4.8 burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCH4:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.31 TCH/4.8 BER Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:TCH4:BER
:CONFigure:RXMeas:SAMPle:TCH4:BER?

Description: Set command defines the number of samples used to calculate TCH/4.8 BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 6,000,000

Default Value: 1290000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:TCH4:BER 250000
Sets the number of samples used to calculate TCH/4.8 BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:TCH4:BER?
250000

6.15.32 TCH/7.2 BER - Measurement Query

:FETCh:RXMeas:TCH7:BER?

Description: Command returns BER measurement for TCH/7.2 burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCH7:BER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.33 TCH/7.2 BER Measurement - Sample Count

:CONFigure:RXMeas:SAMPle:TCH7:BER
:CONFigure:RXMeas:SAMPle:TCH7:BER?

Description: Set command defines the number of samples used to calculate TCH/7.2 BER Measurements.
Query command returns parameter setting.

Range: 1,000 to 10,000,000

Default Value: 170000

Set/Query Format: NR1

Example: :CONFigure:RXMeas:SAMPle:TCH7:BER 250000
Sets the number of samples used to calculate TCH/7.2 BER Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:TCH7:BER?
250000

6.15.34 TCHS BER - Measurement Query

:FETCh:RXMeas:TCHS:xxx?

Description: Command returns specified BER measurement for TCHS burst.

BER Type (XXX): BER0 | BER1 | BER2

Query Data: <statusbyte>,<failbyte>,<rx class>,<BER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

BER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCHS:BER0?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.35 TCHS MER - Measurement Query

:FETCh:RXMeas:TCHS:MER?

Description: Command returns measurement for TCHS burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<MER%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

MER (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCHS:MER?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.36 TCHS PUEM - Measurement Query

:FETCh:RXMeas:TCHS:PUEM?

Description: Command returns measurement for TCHS burst.

Query Data: <statusbyte>,<failbyte>,<rx class>,<PUEM%>,<ErrorBits>,<TotalBits>

statusbyte (NR1): 0 = Valid
1 = Invalid

failbyte (NR1): 0 = Passed
1 = Failed

rx class (NR1): A | B | E

PUEM (NR2): %

error bits, total bits (NR1): value

Query Response: :FETCh:RXMeas:TCHS:PUEM?
1,0,A,0.00000,0,0

NOTE Statusbyte may return more than one condition as a bitmask.

6.15.37 TCHS - Sample Count

:CONFigure:RXMeas:SAMPle:TCHS:xxx
:CONFigure:RXMeas:SAMPle:TCHS:xxx?

Description: Set command defines the number of samples used to calculate TCHS Measurements.
Query command returns parameter setting.

Range:

Class 0, 1 & 2: 1,000 to 10,000,000

MER: 10 to 1,000,000

PUEM: 10 to 1,000,000

Default Value: 30000 (All measaurements)

Set/Query Format: NR1

Parameter (xxx): BER0 | BER1 | BER2 | MER | PUEM

Example: :CONFigure:RXMeas:SAMPle:TCHS:PUEM 250000
Sets the number of samples used to calculate TCHS Measurements to 250,000.

Query Response: :CONFigure:RXMeas:SAMPle:TCHS:PUEM?
250000

6.16 TX MEASUREMENTS TEST TILE

6.16.1 Tx Measurements - Continuous Sweeps

:INITiate:CONTinuous:TXMeas:xxx

Description: Command initiates Continuous Tx Measurement sweeps for Control or Normal bursts.

Burst Type (xxx): CONTrol | NORMal

Parameter: OFF | ON | 0 | 1

Set/Query FormatL Boolean

Default Value: ON

Example: :INITiate:CONTinuous:TXMeas:CONTrol ON
Enables continuous Tx Measurement sweeps for Control burst.

Query Response: :INITiate:CONTinuous:TXMeas:CONTrol?
1

6.16.2 Tx Measurements - Single Sweep

:INITiate:IMMediate:TXMeas:xxx

Description: Command initiates Single Tx Measurements sweep for Control or Normal bursts.

Burst Type (xxx): CONTrol | NORMal

Parameter/Query: none

6.16.3 Tx Measurements - Stop Measurements

:ABORt:TXMeas:CONTrol
:ABORt:TXMeas:NORMal

Description: Command stops Tx Measurements for Control or Normal Bursts

Parameter/Query: none

6.16.4 Burst Timing - Measurement Query

:FETCh:BTIMing:xxx?

Description: Command returns Burst Timing measurement for Control or Normal bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR2): symbols

Query Response: :FETCh:BTIMing:CONTrol?
0,0,20,-0.02,0.00,-0.03,-0.03

NOTE Statusbyte may return more than one condition as a bitmask.

6.16.5 Burst Timing - Sample Count

:CONFigure:BTIMing:SAMPle:xxx
:CONFigure:BTIMing:SAMPle:xxx?

Description: Sets number of samples used to calculate Burst Timing measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:BTIMing:SAMPle:CONTrol 50
Sets number of sample used to calculate Burst Timing Control burst measurements to 50.

Query Response: :CONFigure:BTIMing:SAMPle:CONTrol?
50

6.16.6 Frequency Error - Measurement Query

:FETCh:MACCuracy:FERRor:xxx?

Description: Command returns Frequency Error measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal | CW

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR1): Hz

Query Response: :FETCh:MACCuracy:FERRor:NORMal?
0,0,20,-17.9,-17.6,-18.7,-18.7

NOTE Statusbyte may return more than one condition as a bitmask.

6.16.7 Frequency Error - Sample Count

:CONFigure:MACCuracy:FERRor:SAMPle:xxx
:CONFigure:MACCuracy:FERRor:SAMPle:xxx?

Description: Sets number of samples used to calculate Frequency Error measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst and CW)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal | CW

Example: :CONFigure:MACCuracy:FERRor:SAMPle:CONTrol 50
Sets number of samples used to calculate Frequency Error Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:FERRor:SAMPle:CONTrol?
50

6.16.8 Power - Measurement Query

:FETCh:POWer:xxx?

Description: Command returns Power measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal | CW

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
65536 = Profile failed

sample count (NR1): value

avg, max, min (NR1): dBm

Query Response: :FETCh:POWer:NORMal?
0,7,20,28.5,28.5,28.4

NOTE Statusbyte may return more than one condition as a bitmask.

6.16.9 Power - Sample Count

:CONFigure:POWer:SAMPle:xxx
:CONFigure:POWer:SAMPle:xxx?

Description: Sets number of samples used to calculate Power measurement for Control Bursts or Normal Bursts.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst and CW)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal | CW

Example: :CONFigure:POWer:SAMPle:CONTrol 50
Sets number of samples used to calculate Power Control burst measurements to 50.

Query Response: :CONFigure:POWer:SAMPle:CONTrol?
50

6.16.10 Residual Carrier - Measurement Query

:FETCh:MACCuracy:RCARrier:xxx?

Description: Command returns Residual Carrier measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR1): %

Query Response: :FETCh:MACCuracy:RCARrier:CONTrol?
0,0,20,0.3,0.8

NOTE Statusbyte may return more than one condition as a bitmask.

6.16.11 Residual Carrier - Sample Count

:CONFigure:MACCuracy:RCARrier:SAMPle:xxx
:CONFigure:MACCuracy:RCARrier:SAMPle:xxx?

Description: Sets number of samples used to calculate Residual Carrier measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:MACCuracy:RCARrier:SAMPle:CONTrol 50
Sets number of samples used to calculate Residual Carrier Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:RCARrier:SAMPle:CONTrol?
50

6.16.12 Vector Peak - Measurement Query

:FETCh:MACCuracy:VPEak:xxx?

Description: Command returns Vector Peak measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR1): %

Query Response: :FETCh:MACCuracy:VPEak:NORMal?
0,0,20,9.8,10.9

NOTE Statusbyte may return more than one condition as a bitmask.

6.16.13 Vector Peak Measurement - Sample Count

:CONFigure:MACCuracy:VPEak:SAMPle:xxx
:CONFigure:MACCuracy:VPEak:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector Peak measurement for specified burst type.
Query command returns parameter setting for specified burst type.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:MACCuracy:VPEak:SAMPle:CONTrol 50
Sets number of samples used to calculate Vector Peak Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VPEak:SAMPle:CONTrol?
50

6.16.14 Vector RMS - Measurement Query

:FETCh:MACCuracy:VRMS:xxx?

Description: Command returns Vector RMS measurement for Control or Normal Bursts.

Burst Type (xxx): CONTrol | NORMal

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR1): %

Query Response: :FETCh:MACCuracy:VRMS:CONTrol?
0,0,20,4.9,5.2

NOTE Statusbyte may return more than one condition as a bitmask.

6.16.15 Vector RMS Measurement - Sample Count

:CONFigure:MACCuracy:VRMS:SAMPle:xxx
:CONFigure:MACCuracy:VRMS:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector RMS measurement for specified burst type.
Query command returns parameter setting for specified burst type.

Range: 1 to 250

Default Value: 20 (Normal Burst)
1 (Control Burst)

Set/Query Format: NR1

Burst Type (xxx): CONTrol | NORMal

Example: :CONFigure:MACCuracy:VRMS:SAMPle:CONTrol 50
Sets number of samples used to calculate Vector RMS Control burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VRMS:SAMPle:CONTrol?
50

Chapter 7 - TEDS MS T4 Remote Commands

7.1 INTRODUCTION

This chapter lists the Remote Commands for configuring TEDS MS T4 System Parameters. Remote Commands are listed alphabetically under the following Display Tile headings:

7.2 CHANNEL PLAN CONFIGURATION

7.2.1 Channel Plan - Block 1 or 2 Bandwidth

CHPlan:CB<n>:BANDwidth
CHPlan:CB<n>:BANDwidth?

Description:	Set command defines Channel Plan Bandwidth for indicated Channel Block. Query command returns parameter setting.
CB<n>:	where CB<n> indicates Channel Block 1 or 2
<n>:	1 | 2
Parameter:	0 | 1
where:	0 = 25 kHz 1 = 50 kHz
Default Value:	0
Set/Query Format:	NR1
Example:	CHPlan:CB1:BANDwidth 1 Sets Channel Plan Block 1 Bandwidth to 50 kHz.
Query Response:	CHPlan:CB1:BANDwidth? 1

7.2.2 Channel Plan - Block 1 or 2 Channel Spacing

:CHPLan:CB<n>:CHannel:SPACing
:CHPLan:CB<n>:CHannel:SPACing?

Description: Set command defines Channel Spacing for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Range: 5 to 500 kHz

Units: kHz

Default Value: 0.0 kHz

Set/Query Format: NRf | NR2

Example: :CHPLan:CB1:CHannel:SPACing 25kHz
Sets Channel Block 1 Channel Spacing to 25 kHz.

Query Response: :CHPLan:CB1:CHannel:SPACing?
25.000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.2.3 Channel Plan - Block 1 or 2 Duplex Offset

CHPlan:CB<n>:DUPLex:OFFSet
CHPlan:CB<n>:DUPLex:OFFSet?

Description: Set command defines Channel Plan Duplex Offset for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Range: -100.0 to +100.0 MHz

Units: MHz

Default Value: 0.0 MHz

Set/Query Format: NRf | NR2

Example: CHPlan:CB1:DUPLex:OFFSet 5MHZ
Sets Channel Plan Block 1 Duplex Offset to 5.0 MHz.

Query Response: CHPlan:CB1:DUPLex:OFFSet?
5.00

7.2.4 Channel Plan - Channel Block 1 or 2 Lower Channel

CHPLan:CB<n>:LOWest:CHannel
CHPLan:CB<n>:LOWest:CHannel?

Description: Set command defines the Lower Channel for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Range: 0 to 4000

Default Value: 0

Set/Query Format: NR1

Example: CHPLan:CB1:LOWest:CHannel 5
Sets Lower Channel of Channel Block 1 to 5.

Query Response: CHPLan:CB1:LOWest:CHannel?
5

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.2.5 Channel Plan - Block 1 or 2 Lowest Downlink Frequency

CHPlan:CB<n>:LOWest:DOWNlink:FREQuency
CHPlan:CB<n>:LOWest:DOWNlink:FREQuency?

Description: Set command defines the lowest downlink frequency for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Range: 100.0 kHz to 2.71 GHz

Units: GHz | MHz | kHz | Hz

Default Value: 0 MHz

Set/Query Format: NRf | NR1

Example: CHPlan:CB1:LOWest:DOWNlink:FREQuency 390.01MHZ
Sets Lowest Downlink Frequency of Channel Block 1 to 390.01 MHz.

Query Response: CHPlan:CB1:LOWest:DOWNlink:FREQuency?
390.01

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.2.6 Channel Plan - Block 1 or 2 State

CHPLan:CB<n>:INCLuded
CHPLan:CB<n>:INCLuded?

Description: Set command defines whether or not Channel Block information is valid and should be included in the Channel Plan.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Parameter: EXCLUDED | INCLUDED

Default Value: Excluded

Set/Query Format: NR1

Example: CHPLan:CB1:INCLuded INCLUDED
Sets Channel Plan to Include Channel Block 1 parameters.

Query Response: CHPLan:CB1:INCLuded?
INCLUDED

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.2.7 Channel Plan - Block 1 or 2 Upper Channel

CHPlan:CB<n>:HIGHest:CHannel
CHPlan:CB<n>:HIGHest:CHannel?

Description: Set command defines the Highest Channel for indicated Channel Block.
Query command returns parameter setting.

CB<n>: where CB<n> indicates Channel Block 1 or 2

<n>: 1 | 2

Range: 0 to 4000

Default Value: 0

Set/Query Format: NR1

Example: CHPlan:CB1:HIGHest:CHannel 1000
Sets Upper Channel of Channel Block 1 to 1000.

Query Response: CHPlan:CB1:HIGHest:CHannel?
1000

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.2.8 Channel Plan - Create a New Channel Plan

CHPLan:NEW

Description: Command begins a blank channel plan.

Parameter: none

NOTE Channel plan name is defined using CHPLan:NEW:NAME command.

7.2.9 Channel Plan - Delete Loaded Channel Plan

CHPLan:DELete

Description: Sending this command deletes the channel plan that is currently loaded.

Parameter: none

Query Response: no query

7.2.10 Channel Plan - Duplex Spacing Value

:CHPLan:DUPLex:SPACing
:CHPLan:DUPLex:SPACing?

Description: Set command defines the Duplex Spacing uplink and downlink frequencies.
Query command returns parameter setting.

Range: 0 to 7

Default Value: based on frequency band

Set/Query Format: NR1

Example: :CHPLan:DUPLex:SPACing 2
Sets Duplex Spacing to 2.

Query Response: :CHPLan:DUPLex:SPACing?
2

NOTE Set command only valid when defining a new Channel Plan.

7.2.11 Channel Plan - Frequency Band Reference

CHPLan:FREQuency:BAND
CHPLan:FREQuency:BAND?

Description: Set command defines the reference frequency for the frequency band being used.
Query command returns parameter setting.

Range: 0 to 9

Default Value: 0

Set/Query Format: NR1

Example: CHPlan:FREQuency:BAND 2
Sets Reference Frequency of the Frequency Band to 2.

Query Response: CHPlan:FREQuency:BAND?
2

7.2.12 Channel Plan - List Available Channel Plans

CHPLan:LIST?

Description: Command returns a list of available channel plan names.

Query Format: ascii string, comma delimited

Query Response: CHPLan:LIST?

380-400 ZERO 25kHz,TETRA 870-921 +12.5 25kHz,TETRA 450-470 +12.5 50kHz,TETRA 450-470 ZERO 25kHz,TETRA 805-870 +12.5 25kHz,TETRA 805-870 ZERO 50kHz,TETRA 410-430 +12.5 25kHz,TETRA 380-400 +12.5 50kHz,TETRA 450-470 +12.5 25kHz,TETRA 805-870 ZERO 25kHz,TETRA 870-921 ZERO 50kHz,TETRA 380-400 +12.5 25kHz,TETRA 380-400 ZERO 50kHz,TETRA 870-921 +12.5 50kHz,TETRA 870-921 ZERO 25kHz,TETRA 450-470 ZERO 50kHz,TETRA 805-870 +12.5 50kHz,TETRA 410-430 +12.5 50kHz,No Plan

7.2.13 Channel Plan - Load Channel Plan

:CHPLan:LOAD “parameter”
:CHPLan:LOAD?

Description: Set command loads the named plan as current Channel Plan.
Query command returns name of Channel Plan currently loaded.

Parameter: file name

Default Value: No Plan

Set/Query Format: ascii string | ascii response data

Example: :CHPLan:LOAD “300Band_plan”
Loads 300Band_plan Channel Plan.

Query Response: :CHPLan:LOAD?
TETRA 380-400 ZERO 25kHz

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

7.2.14 Channel Plan - Offset Value

CHPLan:OFFSet
CHPLan:OFFSet?

Description: Set command defines Channel Plan Offset Value.
Query command returns parameter setting.

Parameter: 0 to 3

where: 0 = No Offset
1 = +6.25 kHz
2 = -6.25 kHz
3 = -12.5 kHz

Default Value: 0

Set/Query Format: NR1

Example: CHPLan:OFFSet 2
Set Channel Plan Offset to -6.25 kHz.

Query Response: CHPLan:OFFSet?
2

7.2.15 Channel Plan - Name/Rename Channel Plan

:CHPLan:NAME “parameter”

Description: Set command renames currently loaded channel plan.

Parameter: file name

Set/Query Format: ascii string | ascii response data

Example: :CHPLan:NAME “300Band_plan_modified”
Renames the current channel plan to 300Band_plan_modified.

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

7.2.16 Channel Plan - Reverse Operation

CHPLan:REVerse:OPERation
CHPLan:REVerse:OPERation?

Description: Set command defines the reverse operation of the uplink frequency in relation to the downlink frequency.
Query command returns parameter setting.

Parameter: NORMAL | REVERSE

Default Value: NORMAL

Set/Query Format: NR1

Example: CHPLan:REVerse:OPERation REVERSE
Sets Reverse Operation to Normal.

Query Response: CHPLan:REVerse:OPERation?
REVERSE

NOTE
Command is only valid when No Plan is selected as the Channel Plan.

7.2.17 Channel Plan - Save Channel Plan

CHPLan:SAVE

Description: Command saves current parameters to currently loaded channel plan

Parameter: none

NOTE
Define the channel plan name (CHPLan:NEW:NAME) before defining parameters.

7.3 MOBILE PARAMETERS

7.3.1 Mobile Parameters - Power Class

:MS:POWer:CLASs
:MS:POWer:CLASs?

Description: Set command defines Base Station Power Class.
Query command returns parameter setting.

Parameter: 1 to 10

where:
1 = 46.0 dBm / 40.0 W
2 = 44.0 dBm / 25.0 W
3 = 42.0 dBm / 15.0 W
4 = 40.0 dBm / 10.0 W
5 = 38.0 dBm / 6.3 W
6 = 36.0 dBm / 4.0 W
7 = 34.0 dBm / 2.5 W
8 = 32.0 dBm / 1.6 W
9 = 30.0 dBm / 1.0 W
10 = 28.0 dBm / 600.0 mW

Default Value: 1 (46.0 dBm / 40.0 W)

Set/Query Format: CPD | CRD

Example: :MS:POWer:CLASs 3
Sets Power Class to 42.0 dBm / 15.0 W.

Query Response: :MS:POWer:CLASs?
3

7.4 OFFSETS CONFIGURATION

7.4.1 RF Analyzer - Offset Enable

:CONFigure:OFFSet:ANALyzer:ENABle
:CONFigure:OFFSet:ANALyzer:ENABle?

Description: Set command Enables/Disables the Audio Analyzer Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:ANALyzer:ENABle ON
Enables RF Analyzer Offset.

Query Response: :CONFigure:OFFSet:ANALyzer:ENABle?
1

7.4.2 RF Analyzer - Offset Value

:CONFigure:OFFSet:ANALyzer:VALue
:CONFigure:OFFSet:ANALyzer:VALue?

Description: Set command defines the Audio Analyzer Offset Value.
Query command returns parameter setting.

Range: -40.0 to +40.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:ANALyzer:VALue -10dB
Sets RF Analyzer Offset to -10.0 dB.

Query Response: :CONFigure:OFFSet:ANALyzer:VALue?
-10.00

7.4.3 RF Generator - Offset Enable

:CONFigure:OFFSet:GENerator:ENABle
:CONFigure:OFFSet:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:GENerator:ENABle ON
Enables RF Generator Offset.

Query Response: :CONFigure:OFFSet:GENerator:ENABle?
1

7.4.4 RF Generator - Offset Value

:CONFigure:OFFSet:GENerator:VALue
:CONFigure:OFFSet:GENerator:VALue?

Description: Set command defines RF Generator Offset Value.
Query command returns parameter setting.

Range: -100.0 to +100.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:GENerator:VALue 2.5dB
Set RF Generator Offset to 2.5 dB.

Query Response: :CONFigure:OFFSet:GENerator:VALue?
2.5

7.5 RX MEASUREMENTS LIMITS CONFIGURATION

7.5.1 Bit Error Rate - Lower Limit Enable

:LIMits:BER:LOWer:ENABle
:LIMits:BER:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Bit Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:BER:LOWer:ENABle ON
Enables Lower Limit for Bit Error Rate measurement.

Query Response: :LIMits:BER:LOWer:ENABle?
1

7.5.2 Bit Error Rate - Lower Limit Value

:LIMits:BER:LOWer:VALue
:LIMits:BER:LOWer:VALue?

Description: Set command defines Lower Limit Value for Bit Error Rate measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:BER:LOWer:VALue 1
Sets Lower Limit Value for Bit Error Rate measurement to 1.0%.

Query Response: :LIMits:BER:LOWer:VALue?
1.0000000000

7.5.3 Bit Error Rate - Upper Limit Enable

:LIMits:BER:UPPer:ENABle
:LIMits:BER:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Bit Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:BER:UPPer:ENABle ON
Enables Upper Limit for Bit Error Rate measurement.

Query Response: :LIMits:BER:UPPer:ENABle?
1

7.5.4 Bit Error Rate - Upper Limit Value

:LIMits:BER:UPPer:VALue
:LIMits:BER:UPPer:VALue?

Description: Set command defines Upper Limit Value for Bit Error Rate measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:BER:UPPer:VALue 5
Sets Upper Limit Value for Bit Error Rate measurement to 5%.

Query Response: :LIMits:BER:UPPer:VALue?
5.0000000000

7.5.5 Message Error Rate - Lower Limit Enable

:LIMits:MER:LOWer:ENABle
:LIMits:MER:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Message Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MER:LOWer:ENABle ON
Enables Lower Limit for Message Error Rate measurement.

Query Response: :LIMits:MER:LOWer:ENABle?
1

7.5.6 Message Error Rate - Lower Limit Value

:LIMits:MER:LOWer:VALue
:LIMits:MER:LOWer:VALue?

Description: Set command defines Lower Limit Value for Message Error Rate measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:MER:LOWer:VALue 1
Sets Lower Limit Value for Message Error Rate measurement to 1.0%.

Query Response: :LIMits:MER:LOWer:VALue?
1.0000000000

7.5.7 Message Error Rate - Upper Limit Enable

:LIMits:MER:UPPer:ENABle
:LIMits:MER:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Message Error Rate measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MER:UPPer:ENABle ON
Enables Upper Limit for Message Error Rate measurement.

Query Response: :LIMits:MER:UPPer:ENABle?
1

7.5.8 Message Error Rate - Upper Limit Value

:LIMits:MER:UPPer:VALue
:LIMits:MER:UPPer:VALue?

Description: Set command defines Upper Limit Value for Message Error Rate measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:MER:UPPer:VALue 1
Sets Upper Limit Value for Message Error Rate measurement to 1.0%.

Query Response: :LIMits:MER:UPPer:VALue?
1.0000000000

7.6 SYSTEM ID

7.6.1 System ID & Sync Parameters - Base Station Color Code

:TRANsmit:BCC
:TRANsmit:BCC?

Description: Set command defines Base Station Color Code value.
Query command returns parameter setting.

Range: 0 to 63

Default Value: 1

Set/Query Format: NR1

Example: :TRANsmit:BCC 50
Sets Transmit Color Code to 50.

Query Response: :TRANsmit:BCC?
50

7.6.2 System ID & Sync Parameters - Base Station Mobile Country Code

:TRANsmit:MCC
:TRANsmit:MCC?

Description: Set command defines Transmit Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 1023

Default Value: 1

Set/Query Format: NR1

Example: :TRANsmit:MCC
Sets Transmit Mobile Country Code to 234 (United Kingdom).

Query Response: :TRANsmit:MCC?
234

7.6.3 System ID & Sync Parameters - Base Station Mobile Network Code

:TRANsmit:MNC
:TRANsmit:MNC?

Description: Set command defines Transmit Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 16383

Default Value: 1

Set/Query Format: NR1

Example: :TRANsmit:MNC
Sets Transmit Mobile Network Code to 1234.

Query Response: :TRANsmit:MNC?
1234

7.7 TX MEASUREMENTS LIMITS CONFIGURATION

7.7.1 Burst Timing - Lower Limit Enable

:LIMits:BTIMing:LOWer:ENABle
:LIMits:BTIMing:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Burst Timing measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:BTIMing:LOWer:ENABle ON
Enables Lower Limit for Burst Timing measurement.

Query Response: :LIMits:BTIMing:LOWer:ENABle?
1

7.7.2 Burst Timing - Lower Limit Value

:LIMits:BTIMing:LOWer:VALue
:LIMits:BTIMing:LOWer:VALue?

Description: Set command defines Lower Limit Value for Burst Timing measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:BTIMing:LOWer:VALue 1
Sets Lower Limit Value for Burst Timing measurement to 1.0%

Query Response: :LIMits:BTIMing:LOWer:VALue?
1.0000000000

7.7.3 Burst Timing - Upper Limit Enable

:LIMits:BTIMing:UPPer:ENABle
:LIMits:BTIMing:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Burst Timing measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:BTIMing:UPPer:ENABle ON
Enables Upper Limit for Burst Timing measurement.

Query Response: :LIMits:BTIMing:UPPer:ENABle?
1

7.7.4 Burst Timing - Upper Limit Value

:LIMits:BTIMing:UPPer:VALue
:LIMits:BTIMing:UPPer:VALue?

Description: Set command defines Upper Limit Value for Burst Timing measurement.
Query command returns parameter setting.

Range: 0.0 to 100.0%

Units: % (percent)

Default Value: 0.0%

Set/Query Format: NRf | NR2

Example: :LIMits:BTIMing:UPPer:VALue 50
Sets Upper Limit Value for Burst Timing measurement to 50%

Query Response: :LIMits:BTIMing:UPPer:VALue?
50

7.7.5 IQ Imbalance - Lower Limit Enable

:LIMits:IQI:LOWer:ENABle
:LIMits:IQI:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for IQ Imbalance measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:IQI:LOWer:ENABle ON
Enables Lower Limit for IQ Imbalance measurement.

Query Response: :LIMits:IQI:LOWer:ENABle?
1

7.7.6 IQ Imbalance - Lower Limit Value

:LIMits:IQI:LOWer:VALue
:LIMits:IQI:LOWer:VALue?

Description: Set command defines Lower Limit Value for IQ Imbalance measurement.
Query command returns parameter setting.

Range: 0.0 to 2.0

Default Value: 0.0

Set/Query Format: NR1

Example: :LIMits:IQI:LOWer:VALue 1
Sets Lower Limit Value for IQ Imbalance measurement to 1.

Query Response: :LIMits:IQI:LOWer:VALue?
1.0000000000

7.7.7 IQ Imbalance - Upper Limit Enable

:LIMits:IQI:UPPer:ENABle
:LIMits:IQI:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for IQ Imbalance measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:IQI:UPPer:ENABle ON
Enables Upper Limit for IQ Imbalance measurement.

Query Response: :LIMits:IQI:UPPer:ENABle?
1

7.7.8 IQ Imbalance - Upper Limit Value

:LIMits:IQI:UPPer:VALue
:LIMits:IQI:UPPer:VALue?

Description: Set command defines Upper Limit Value for IQ Imbalance measurement.
Query command returns parameter setting.

Range: 0.0 to 2.0

Default Value: 0.0

Set/Query Format: NR1

Example: :LIMits:IQI:UPPer:VALue 1.5
Sets Upper Limit Value for IQ Imbalance measurement to 1.5.

Query Response: :LIMits:IQI:UPPer:VALue?
1.5000000000

7.7.9 Mean Frequency Error - Lower Limit Enable

:LIMits:MFERRor:LOWer:ENABle
:LIMits:MFERRor:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Mean Frequency Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MFERRor:LOWer:ENABle ON
Enables Lower Limit for Mean Frequency Error measurement.

Query Response: :LIMits:MFERRor:LOWer:ENABle?
1

7.7.10 Mean Frequency Error - Lower Limit Value

:LIMits:MFERRor:LOWer:VALue
:LIMits:MFERRor:LOWer:VALue?

Description: Set command defines Lower Limit Value for Mean Frequency Error measurement.
Query command returns parameter setting.

Range: -2000 to 2000 Hz
-1000 to 1000 ppm

Units: Hz | ppm

Default Value: 0 Hz

Set/Query Format: NRf | NR2

Example: :LIMits:MFERRor:LOWer:VALue 2.0
Sets Lower Limit Value for Mean Frequency Error measurement to 100 Hz.

Query Response: :LIMits:MFERRor:LOWer:VALue?
100

NOTE Units is defined using :METERs:MFERRor:UNIts remote command.

7.7.11 Mean Frequency Error - Upper Limit Enable

:LIMits:MFERRor:UPPer:ENABle
:LIMits:MFERRor:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Mean Frequency Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:MFERRor:UPPer:ENABle ON
Enables Upper Limit for Mean Frequency Error measurement.

Query Response: :LIMits:MFERRor:UPPer:ENABle?
1

7.7.12 Mean Frequency Error - Upper Limit Value

:LIMits:MFERRor:UPPer:VALue
:LIMits:MFERRor:UPPer:VALue?

Description: Set command defines Upper Limit Value for Mean Frequency Error measurement.
Query command returns parameter setting.

Range: -2000 to 2000 Hz
-1000 to 1000 ppm

Units: Hz | ppm

Default Value: 0 Hz

Set/Query Format: NRf | NR2

Example: :LIMits:MFERRor:UPPer:VALue 100
Sets Upper Limit Value for Mean Frequency Error measurement to 100 Hz.

Query Response: :LIMits:MFERRor:UPPer:VALue?
100

NOTE Units is defined using :METERs:MFERRor:UNIts remote command.

7.7.13 Peak Vector Error - Lower Limit Enable

:LIMits:VPEak:LOWer:ENABle
:LIMits:VPEak:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Peak Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VPEak:LOWer:ENABle ON
Enables Lower Limit for Peak Vector Error measurement.

Query Response: :LIMits:VPEak:LOWer:ENABle?
1

7.7.14 Peak Vector Error - Lower Limit Value

:LIMits:VPEak:LOWer:VALue
:LIMits:VPEak:LOWer:VALue?

Description: Set command defines Lower Limit Value for Peak Vector Error measurement.
Query command returns parameter setting.

Range: 0.0 to 200.0%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :LIMits:VPEak:LOWer:VALue 10
Sets Lower Limit Value for Peak Vector Error measurement to 10%.

Query Response: :LIMits:VPEak:LOWer:VALue?
10.0000000000

7.7.15 Peak Vector Error - Upper Limit Enable

:LIMits:VPEak:UPPer:ENABle
:LIMits:VPEak:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Peak Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VPEak:UPPer:ENABle ON
Enables Upper Limit for Peak Vector Error measurement.

Query Response: :LIMits:VPEak:UPPer:ENABle?
1

7.7.16 Peak Vector Error - Upper Limit Value

:LIMits:VPEak:UPPer:VALue
:LIMits:VPEak:UPPer:VALue?

Description: Set command defines Upper Limit Value for Peak Vector Error measurement.
Query command returns parameter setting.

Range: 0.0 to 200.0%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :LIMits:VPEak:UPPer:VALue 20
Sets Upper Limit Value for Peak Vector Error measurement to 20%.

Query Response: :LIMits:VPEak:UPPer:VALue?
20.0000000000

7.7.17 RMS Vector Error - Lower Limit Enable

:LIMits:VRMS:LOWer:ENABle
:LIMits:VRMS:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for RMS Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VRMS:LOWer:ENABle ON
Enables Lower Limit for RMS Vector Error measurement.

Query Response: :LIMits:VRMS:LOWer:ENABle?
1

7.7.18 RMS Vector Error - Lower Limit Value

:LIMits:VRMS:LOWer:VALue
:LIMits:VRMS:LOWer:VALue?

Description: Set command defines Lower Limit Value for RMS Vector Error measurement.
Query command returns parameter setting.

Range: 0.0 to 200.0%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :LIMits:VRMS:LOWer:VALue 10
Sets Lower Limit Value for RMS Vector Error measurement to 10%.

Query Response: :LIMits:VRMS:LOWer:VALue?
10.0000000000

7.7.19 RMS Vector Error - Upper Limit Enable

:LIMits:VRMS:UPPer:ENABle
:LIMits:VRMS:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for RMS Vector Error measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:VRMS:UPPer:ENABle ON
Enables Upper Limit for RMS Vector Error measurement.

Query Response: :LIMits:VRMS:UPPer:ENABle?
1

7.7.20 RMS Vector Error - Upper Limit Value

:LIMits:VRMS:UPPer:VALue
:LIMits:VRMS:UPPer:VALue?

Description: Set command defines Upper Limit Value for RMS Vector Error measurement.
Query command returns parameter setting.

Range: 0.0 to 200.0%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :LIMits:VRMS:UPPer:VALue 20
Sets Upper Limit Value for RMS Vector Error measurement to 20%.

Query Response: :LIMits:VRMS:UPPer:VALue?
20.0000000000

7.7.21 Signal Power - Lower Limit Enable

:LIMits:POWer:LOWer:ENABle
:LIMits:POWer:LOWer:ENABle?

Description: Set command Enables/Disables Lower Limit for Signal Power measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:POWer:LOWer:ENABle ON
Enables Lower Limit for Signal Power measurement.

Query Response: :LIMits:POWer:LOWer:ENABle?
1

7.7.22 Signal Power - Lower Limit Value

:LIMits:POWer:LOWer:VALue
:LIMits:POWer:LOWer:VALue?

Description: Set command defines Lower Limit Value for Signal Power measurement.
Query command returns parameter setting.

Range: -140.0 to 70.0 dBm

Units: dBm

Default Value: 0.0 dBm

Set/Query Format: NRf | NR2

Example: :LIMits:POWer:LOWer:VALue -45
Sets Lower Limit Value for Signal Power measurement to -45.0 dBm

Query Response: :LIMits:POWer:LOWer:VALue?
-45.00

7.7.23 Signal Power - Upper Limit Enable

:LIMits:POWer:UPPer:ENABle
:LIMits:POWer:UPPer:ENABle?

Description: Set command Enables/Disables Upper Limit for Signal Power measurement.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :LIMits:POWer:UPPer:ENABle ON
Enables Upper Limit for Signal Power measurement.

Query Response: :LIMits:POWer:UPPer:ENABle?
1

7.7.24 Signal Power - Upper Limit Value

:LIMits:POWer:UPPer:VALue
:LIMits:POWer:UPPer:VALue?

Description: Set command defines Upper Limit Value for Signal Power measurement.
Query command returns parameter setting.

Range: -140.0 to 70.0 dBm

Units: dBm

Default Value: 0.0 dBm

Set/Query Format: NRf | NR2

Example: :LIMits:POWer:UPPer:VALue -45
Sets Upper Limit Value for Signal Power measurement to -45.0 dBm

Query Response: :LIMits:POWer:UPPer:VALue?
-45.00

7.8 CONTROL

7.8.1 Duplex Spacing - Mode of Operation

:DUPLex:LOCK
:DUPLex:LOCK?

Description: Enables/disables Duplex Spacing.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :DUPLex:LOCK ON
Sets Duplex Mode of Operation to ON.

Query Response: :DUPLex:LOCK?
1

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.8.2 Duplex Spacing - Offset Value

:DUPLex:SPACing
:DUPLex:SPACing?

Description: Set command defines the RF Duplex Spacing.
Query command returns parameter setting.

Range: -999.0 to +999.0 MHz

Units: Hz | kHz | MHz | GHz

Default Value: 10.0 MHz

Set/Query Format: NRf | NR2 (Hz)

Example: :DUPLex:SPACing 15MHz
Sets Duplex Spacing to 15.0 MHz.

Query Response: :DUPLex:SPACing?
15000000.0

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.8.3 Modulation Generator - Enable

:TRANsmit:MODulation
:TRANsmit:MODulation?

Description: Set command Enables/Disables Generator Modulation.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :TRANsmit:MODulation OFF
Turns Modulation Generator off.

Query Response: :TRANsmit:MODulation?
0

7.8.4 Receiver - Automatic Gain Control

:RECeive:AGC
:RECeive:AGC?

Description: Set command Enables/Disables Receiver Automatic Gain Control.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RECeive:AGC OFF
Turns Automatic Gain Control off.

Query Response: :RECeive:AGC?
0

7.8.5 Receiver - Bandwidth

:RECeive:BANDwidth
:RECeive:BANDwidth?

Description: Set command defines the Receiver Bandwidth.
Query command returns parameter setting.

Parameter: KHZ25 | KHZ50

Default Value: KHZ25 (25 kHz)

Set/Query Format: CPD | CRD

Example: :RECeive:BANDwidth KHZ25
Sets Receiver Bandwidth to 25.0 kHz.

Query Response: :RECeive:BANDwidth?
KHZ25

7.8.6 Receiver - Frequency

:RF:ANALyzer:FREQuency
:RF:ANALyzer:FREQuency?

Description: Set command defines the RF Analyzer Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units : Hz | kHz | MHz | GHz

Default Value: 390.0 MHz

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:ANALyzer:FREQuency 400MHz
Sets RF Analyzer Frequency to 400.0 MHz.

Query Response: :RF:ANALyzer:FREQuency?
400.0

NOTE Command is only valid when No Plan is selected as the Channel Plan.

7.8.7 Receiver - Loopback Mode

:RECeive:LOOPback
:RECeive:LOOPback?

Description: Set command defines Loopback mode.
Query command returns parameter setting.

Parameter: OFF | MER | BER

Default Value: OFF

Set/Query Format: Boolean

Example: :RECeive:LOOPback BER
Sets Loopback Mode to BER.

Query Response: :RECeive:LOOPback?
BER

7.8.8 Receiver - Mobile Tx Burst Control

:RECeive:MS:CONTrol
:RECeive:MS:CONTrol?

Description: Set command defines the type of burst being transmitted by the mobile to the Test Set.
Query command returns parameter setting.

Parameter: OFF | NORMAL | CONTROL

Default Value: OFF

Set/Query Format: CPD | CRD

Example: :RECeive:MS:CONTrol NORMAL
Sets Test Set to receive a Normal Burst from the Mobile.

Query Response: :RECeive:MS:CONTrol?
NORMAL

7.8.9 Receiver - Signal Width Mode

TEST:SIGnal:WIDth
TEST:SIGnal:WIDth?

Description: Set command defines Signal Width Test Mode.
Query command returns parameter setting.

Parameter: 0 | 1
0 = One Slot
1 = Four Slots

Default Value: 0

Set/Query Format: NR1

Example: TEST:SIGnal:WIDth 1
Sets Signal Width to test 4 slots.

Query Response: TEST:SIGnal:WIDth?
1

7.8.10 Receiver - Input Connector

:RF:ANALyzer:PORT
:RF:ANALyzer:PORT?

Description: Set command selects the RF Input Connector.
Query command returns parameter setting.

Parameter: TR | ANT

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:PORT ANT
Selects Antenna Connector as RF Input Connector.

Query Response: :RF:ANALyzer:PORT?
ANT

NOTE Refer to 3900 Platform Specifications for maximum input values.

7.8.11 Receiver - Pre-Amplifier Enable

:RF:ANALyzer:RECeiver:AMP
:RF:ANALyzer:RECeiver:AMP?

Description: Set command Enables/Disables Receiver Pre-Amplifier.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :RF:ANALyzer:RrECeiver:AMP ON
Enables Receiver Pre-Amplifier.

Query Response: :RF:ANALyzer:RECeiver:AMP?
1

7.8.12 RF Generator - Enable

:RF:GENerator:ENABle
:RF:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:ENABle ON
Enables RF Generator.

Query Response: :RF:GENerator:ENABle?
1

7.8.13 RF Generator - Frequency

:RF:GENerator:FREQuency
:RF:GENerator:FREQuency?

Description: Set command defines RF Generator Frequency.
Query command returns parameter setting.
Range: 100.0 kHz to 2.71 GHz
Units: Hz | kHz | MHz | GHz
Default Value: 390.00 MHz
Set/Query Format: NRf | NR1 (Hz)
Example: :RF:GENerator:FREQuency 400MHz
Sets RF Generator Frequency to 400.0 MHz.
Query Response: :RF:GENerator:FREQuency?
400.0

7.8.14 RF Generator - Level

:RF:GENerator:LEVel
:RF:GENerator:LEVel?

Description: Set command defines RF Generator Level.
Query command returns parameter setting.
Range: **TR:** -130.0 to -40.0 dBm
GEN: -130.0 to 0.0 dBm
Units: dBm
Default Value: -40.0 dBm
Set/Query Format: NRf | NR2
Example: :RF:GENerator:LEVel -40dBm
Sets RF Generator Level to -40.0 dBm.
Query Response: :RF:GENerator:LEVel?
-40.00

7.8.15 RF Generator - Output Connector

:RF:GENerator:PORT
:RF:GENerator:PORT?

Description: Set command selects the RF Out connector.
Query command returns parameter setting.
Parameter: TR | GEN
Default Value: GEN
Set/Query Format: CPD | CRD
Example: :RF:GENerator:PORT GEN
Selects Generator Connector as RF Output Connector.
Query Response: :RF:GENerator:PORT?
GEN

7.8.16 Transmit - Access Parameter

:TRANsmit:ACCESS
:TRANsmit:ACCESS?

Description: Set command defines Transmit (Mobile) Access Parameter.
Query command returns parameter setting.

Parameter: 0 to 15

where:

0 = -53 dBm	8 = -37 dBm
1 = -51 dBm	9 = -35 dBm
2 = -49 dBm	10 = -33 dBm
3 = -47 dBm	11 = -31 dBm
4 = -45 dBm	12 = -29 dBm
5 = -43 dBm	13 = -27 dBm
6 = -41 dBm	14 = -25 dBm
7 = -39 dBm	15 = -23 dBm

Default Value: 0 (-53 dBm)

Set/Query Format: NR1

Example: :TRANsmit:ACCESS 12
Sets Transmit (Mobile) Access Parameter to -29 dBm.

Query Response: :TRANsmit:ACCESS?
12

7.8.17 Transmit - Maximum Tx Level

:TRANsmit:MAXimum:LEVel
:TRANsmit:MAXimum:LEVel?

Description: Set command defines System Maximum Tx Level.
Query command returns parameter setting.

Parameter: 0 to 7

where:
0 = Reserved/Not allowed
1 = 15 dBm
2 = 20 dBm
3 = 25 dBm
4 = 30 dBm
5 = 35 dBm
6 = 40 dBm
7 = 45 dBm

Default Value: 1 (15 dBm)

Set/Query Format: NR1

Example: :TRANsmit:MAXimum:LEVel 2
Sets System Maximum Tx Level to 20.0 dBm.

Query Response: :TRANsmit:MAXimum:LEVel?
2

7.8.18 Transmit - Mobile Power Level

MS:POWer
MS:POWer?

Description: Set command defines Transmit (Mobile) Power Level.
Query command returns parameter setting.

T/R Parameter: 0 to 10

ANT Parameter: 11 to 27

where:

1 = 55.0 dBm / 300 W	11 = 5.0 dBm / 3 mW
2 = 50.0 dBm / 100 W	12 = 0.0 dBm / 1 mW
3 = 45.0 dBm / 30 W	13 = -5.0 dBm / 300 µW
4 = 40.0 dBm / 10 W	14 = -10.0 dBm / 100 µW
5 = 35.0 dBm / 3 W	15 = -15.0 dBm / 30 µW
6 = 30.0 dBm / 1 W	16 = -20.0 dBm / 10 µW
7 = 25.0 dBm / 300 mW	17 = -25.0 dBm / 3 µW
8 = 20.0 dBm / 100 mW	18 = -30.0 dBm / 1 µW
9 = 15.0 dBm / 30 mW	19 = -35.0 dBm
10 = 10.0 dBm / 10 mW	20 = -40.0 dBm

Default Value: 1 (55.0 dBm / 300 W

Set/Query Format: NRf | NR2

Example: MS:POWer 12
Sets Transmit (Mobile) Power Level to 0.0 dBm / 1 mW.

Query Response: MS:POWer?
12

7.8.19 Transmit - Mobile Power Type

MS:POWer:TYPE
MS:POWer:TYPE?

Description: Set command defines Transmit (Mobile) Power Type.
Query command returns parameter setting.

Parameter: OPENLOOP | EXPECTED

Default Value: OPENLOOP

Set/Query Format: CPD | CRD

Example: MS:POWer:TYPE EXPECTED
Defines Mobile Power Type as Expected.

Query Response: MS:POWer:TYPE?
EXPECTED

7.8.20 Transmit - Offset Value

:TRANsmit:OFFSet
:TRANsmit:OFFSet?

Description: Set command defines Transmit Offset Value.
Query command returns parameter setting.

Parameter: 0 to 3

where: 0 = No Offset
1 = +6.25 kHz
2 = -6.25 kHz
3 = -12.5 kHz

Default Value: 0 (No Offset)

Set/Query Format: NR1

Example: :TRANsmit:OFFSet 2
Set Transmit Offset to -6.25 kHz.

Query Response: :TRANsmit:OFFSet?
2

7.8.21 Transmit - QAM Type

:TRANsmit:QAM
:TRANsmit:QAM?

Description: Set command defines the QAM being transmitted by the Test Set.
Query command returns parameter setting.

Parameter: 0 = 4-QAM (r=1/2)
1 = 4-QAM (r=1)
2 = 16-QAM (r=1/2)
3 = 16-QAM (r=1)
4 = 64-QAM (r=1/2)
5 = 64-QAM (r= 2/3)
6 = 64-QAM (r=1)

Default Value: 0

Set/Query Format: NR1

Example: :TRANsmit:QAM 2
Sets Test Set to transmit to send a 16-QAM (r=1/2) modulated signal.

Query Response: :TRANsmit:QAM?
2

7.8.22 Transmit - RF Channel

:TRANsmit:CHannel
:TRANsmit:CHannel?

Description:	Set command defines Transmit Channel. Query command returns parameter setting.
Range:	0 to 4000
Default Value:	3600
Set/Query Format:	NR1
Example:	:TRANsmit:CHannel 3700 Sets Transmit Channel to 3700.
Query Response:	:TRANsmit:CHannel? 3700

7.9 RX MEASUREMENTS

7.9.1 Meters (All) - Averages

:METERs:ALL:AVERaging
:METERs:ALL:AVERaging?

Description: Set command defines the number of readings taken to calculate all Average measurements.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NRf | NR1

Example: :METERs:ALL:AVERaging 75
Sets number of readings taken to calculate Average measurements to 75.

Query Response: :METERs:ALL:AVERaging?
75

7.9.2 Rx Measurements - Measurement Mode

:METERs:RX:MEASurement:MODE
:METERs:RX:MEASurement:MODE?

Description: Set command defines single or repeat measurements for BER and MER Rx Measurements.
Query command returns parameter setting.

Parameter: SINGLE | REPEAT

Default Value: SINGLE

Set/Query Format: CPD | CRD

Example: :METERs:RX:MEASurement:MODE REPEAT
Enables Repeat BER and MER measurements.

Query Response: :METERs:RX:MEASurement:MODE?
REPEAT

7.9.3 Bit Error Rate - Averages

:METERs:BER:AVERaging
:METERs:BER:AVERaging?

Description: Set command defines number of readings taken to calculate Average Bit Error Rate measurement.
Query command returns parameter setting.

Range: 1 to 10,000,000

Default Value: 5000

Set/Query Format: NR1

Example: :METERs:BER:AVERaging 100
Sets the number of readings taken to calculate Average Bit Error Rate measurement to 100.

Query Response: :METERs:BER:AVERaging?
100

7.9.4 Bit Error Rate - Average Measurement Reset

:METERs:BER:CLEAR:AVG

Description: Command clears and resets Average Bit Error Rate measurement.

Parameter/Query: none

7.9.5 Bit Error Rate - Measurement Query

:METERs:BER:STATus?

Description: Command returns Bit Error Rate measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<errored>,<total>,<samples>,<time stamp>,<unit>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

average: Indicates the average BER measurement

errored: Indicates the number of bits received in error

total: Indicates the total number of bits received

samples: Indicates the number of samples acquired to perform measurement

time stamp: Indicates time of measurement in HH:MM:SS format

units (NR1): Refer to Appendix A.

Query Response: :METERs:BER:STATus?
0, 0, 3, 109.571, 0.000, 0.000, 5232.000, 4775, 00:00:00, 1

7.9.6 Bit Error Rate - Peak Measurement Reset

:METERs:BER:CLEAR:PEAK

Description: Command clears and resets Peak Bit Error Rate measurement.

Parameter/Query: none

7.9.7 Message Error Rate - Averages

:METERs:MER:AVERaging
:METERs:MER:AVERaging?

Description: Set command defines number of readings taken to calculate Average Message Error Rate measurement.
Query command returns parameter setting.

Range: 1 to 10,000,000

Default Value: 6000

Set/Query Format: NR1

Example: :METERs:MER:AVERaging 100
Sets the number of readings taken to calculate Average Message Error Rate measurement to 100.

Query Response: :METERs:MER:AVERaging?
100

7.9.8 Magnitude Error Rate - Average Measurement Reset

:METERs:MER:CLEAR:AVG

Description: Command clears and resets Average Magnitude Error Rate measurement.

Parameter/Query: none

7.9.9 Magniture Error Rate - Measurement Query

:METERs:MER:STATus?

Description: Command returns Magnitude Error Rate measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

average: Indicates the average BER measurement

errored: Indicates the number of bits received in error

total: Indicates the total number of bits received

samples: Indicates the number of samples acquired to perform measurement

time stamp: Indicates time of measurement in HH:MM:SS format

units (NR1): Refer to Appendix A.

Query Response: :METERs:MER:STATus?
0, 16, 3, 100.000, 28.525, 1141.000, 4000.000, 4000, 00:03:46, 1

7.9.10 Magnitude Error Rate - Peak Measurement Reset

:METERs:MER:CLEAR:PEAK

Description: Command clears and resets Peak Magnitude Error Rate measurement.

Parameter/Query: none

7.10 TX MEASUREMENTS

7.10.1 Meters (All) - Averages

:METERs:ALL:AVERaging
:METERs:ALL:AVERaging?

Description: Set command defines the number of readings taken to calculate all Average measurements.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NRf | NR1

Example: :METERs:ALL:AVERaging 75
Sets number of readings taken to calculate Average measurements to 75.

Query Response: :METERs:ALL:AVERaging?
75

7.10.2 Burst Timing - Averages

:METERs:BTIMing:AVERaging
:METERs:BTIMing:AVERaging?

Description: Set command defines number of readings taken to calculate Average Burst Timing measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:BTIMing:AVERaging 100
Sets the number of readings taken to calculate Average Burst Timing measurement to 100.

Query Response: :METERs:BTIMing:AVERaging?
100

7.10.3 Burst Timing - Average Measurement Reset

:METERs:BTIMing:CLEAR:AVG

Description: Command clears and resets Average Burst Timing measurement.

Parameter/Query: none

7.10.4 Burst Timing - Measurement Query

:METERs:BTIMing:STATus?

Description: Command returns Burst Timing measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<wc max>,<wc min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = S
0x2 = Inaccurate	ettling
	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (3): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings. Always 3.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

wc max, wc min (NR2): <units>

units (NR1): Reference Appendix A.

Query Response: :METERs:BTIMing:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

NOTE wc max (Worst Case Maximum) is a remote only parameter. Reading is not available on the GUI.

7.10.5 Burst Timing - Peak Measurement Reset

:METERs:BTIMing:CLEAR:PEAK

Description: Command clears and resets Burst Timing measurement.

Parameter/Query: none

7.10.6 IQ Imbalance - Averages

:METERs:IQI:AVERaging
:METERs:IQI:AVERaging?

Description: Set command defines number of readings taken to calculate Average IQ Imbalance measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:IQI:AVERaging 100
Sets the number of readings taken to calculate Average IQ Imbalance measurement to 100.

Query Response: :METERs:IQI:AVERaging?
100

7.10.7 IQ Imbalance - Average Measurement Reset

:METERs:IQI:CLEAR:AVG

Description: Command clears and resets Average IQ Imbalance measurement.

Parameter/Query: none

7.10.8 IQ Imbalance - Measurement Query

:METERs:IQI:STATus?

Description: Command returns IQ Imbalance measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:IQI:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

7.10.9 IQ Imbalance - Peak Measurement Reset

:METERs:IQI:CLEAR:PEAK

Description: Command clears and resets Peak IQ Imbalance measurement.

Parameter/Query: none

7.10.10 Mean Frequency Error - Averages

:METERs:MFERRor:AVERaging
:METERs:MFERRor:AVERaging?

Description: Set command defines number of readings taken to calculate Average Mean Frequency Error measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:MFERRor:AVERaging 100
Sets the number of readings taken to calculate Average Mean Frequency Error measurement to 100.

Query Response: :METERs:MFERRor:AVERaging?
100

7.10.11 Mean Frequency Error - Average Measurement Reset

:METERs:MFERRor:CLEAR:AVG

Description: Command clears and resets Average Mean Frequency Error measurement.

Parameter/Query: none

7.10.12 Mean Frequency Error - Measurement Query

:METERs:MFERRor:STATus?

Description: Command returns Mean Frequency Error measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<wc max>,<wc min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (3): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings. Always 3.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

wc max, wc min (NR2): <units>

units (NR1): Reference Appendix A.

Query Response: :METERs:MFERRor:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

7.10.13 Mean Frequency Error - Peak Measurement Reset

:METERs:MFERRor:CLEAR:PEAK

Description: Command clears and resets Peak Mean Frequency Error measurement.

Parameter/Query: none

7.10.14 Peak Vector Error - Averages

:METERs:VPEak:AVERaging
:METERs:VPEak:AVERaging?

Description: Set command defines number of readings taken to calculate Average Peak Vector Error measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:VPEak:AVERaging 100
Sets the number of readings taken to calculate Average Peak Vector Error measurement to 100.

Query Response: :METERs:VPEak:AVERaging?
100

7.10.15 Peak Vector Error - Average Measurement Reset

:METERs:VPEak:CLEAR:AVG

Description: Command clears and resets Average Peak Vector Error measurement.

Parameter/Query: none

7.10.16 Peak Vector Error - Measurement Query

:METERs:VPEak:STATus?

Description: Command returns Peak Vector Error measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:VPEak:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

7.10.17 Peak Vector Error - Peak Measurement Reset

:METERs:VPEak:CLEAR:PEAK

Description: Command clears and resets Peak Vector Error measurement.

Parameter/Query: none

7.10.18 RMS Vector Error - Averages

:METERs:VRMS:AVERaging
:METERs:VRMS:AVERaging?

Description: Set command defines number of readings taken to calculate Average RMS Vector Error measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:VRMS:AVERaging 100
Sets the number of readings taken to calculateAverage RMS Vector Error measurement to 100.

Query Response: :METERs:VRMS:AVERaging?
100

7.10.19 RMS Vector Error - Average Measurement Reset

:METERs:VRMS:CLEAR:AVG

Description: Command clears and resets Average Power measurement.

Parameter/Query: none

7.10.20 RMS Vector Error - Measurement Query

:METERs:VRMS:STATus?

Description: Command returns RMS Vector Error measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:VRMS:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

7.10.21 RMS Vector Error - Peak Measurement Reset

:METERs:VRMS:CLEAR:PEAK

Description: Command clears and resets RMS Vector Error measurement.

Parameter/Query: none

7.10.22 Signal Power - Averages

:METERs:POWer:AVERaging
:METERs:POWer:AVERaging?

Description: Set command defines number of readings taken to calculate Average Signal Power measurement.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 1

Set/Query Format: NR1

Example: :METERs:POWer:AVERaging 100
Sets the number of readings taken to calculateAverage Signal Power measurement to 100.

Query Response: :METERs:POWer:AVERaging?
100

7.10.23 Signal Power - Average Measurement Reset

:METERs:POWer:CLEAR:AVG

Description: Command clears and resets Average Power measurement.

Parameter/Query: none

7.10.24 Signal Power - Measurement Query

:METERs:POWer:STATus?

Description: Command returns Signal Power measurement data.

Query Data: <statusbyte>,<failbyte>,<precision>,<percentage>,<avg>,<max>,<min>,<units>

statusbyte (NR1): Bitmask

0x1 = Invalid	0x4 = Settling
0x2 = Inaccurate	0x8 = Squelch

failbyte (NR1): Bitmask

0x80 = WC Lower Limit	0x08 = Max Lower Limit
0x40 = WC Upper Limit	0x04 = Max Upper Limit
0x20 = Avg Lower Limit	0x02 = Min Lower Limit
0x10 = Avg Upper Limit	0x01 = Min Upper Limit

precision (NR1): Value indicates number of numerals that follow the decimal point in returned average, maximum and minimum readings.

percentage (NR1): Percentage value indicates the percentage of averaging completed when remote command was issued.

avg,max,min (NR2): <units>

units (NR1): Refer to Appendix A.

Query Response: :METERs:POWer:STATus?
0,0,3 100.00, -30.183, -30.140, -30.241,6

7.10.25 Signal Power - Peak Measurement Reset

:METERs:POWer:CLEAR:PEAK

Description: Command clears and resets Peak Signal Power measurement.

Parameter/Query: none

7.11 CONSTELLATION GRAPH

7.11.1 Constellation - Enable Trace

:CONStellation:TRACe:ENABle
:CONStellation:TRACe:ENABle?

Description: Set command Enables/Disables Constellation trace.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: NR1

Example: :CONStellation:TRACe:ENABle 1
Enables Constellation trace.

Query Response: :CONStellation:TRACe:ENABle?
1

7.11.2 Constellation - Trace Mode (Single or Continuous)

:CONStellation:TRACe:REPEat
:CONStellation:TRACe:REPEat?

Description: Set command sets trace mode on Constellation graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :CONStellation:TRACe:REPEat OFF
Sets Constellation Graph to acquire a single trace.

Query Response: :CONStellation:TRACe:REPEat?
0

7.11.3 Constellation - Trace Query

:CONStellation:TRACe:LIVE?

Description: Command returns graph coordinates of Channel.

Query Data: <statusbyte>,<symbols>,<#pairs>,<x data>,<y data>

statusbyte (NR1): 0 = Invalid
1 = Valid

symbols: bitmask

#pairs (NR1): Number of x,y coordinate pairs to follow

x, y data (NR2): coordinate value

Query Response: :CONStellation:TRACe:LIVE?
1,1,12,-1.00,0.06,-0.82,0.57,-0.87,-0.49,0.76,0.65,0.76,-0.65,-0.87,0.49,-0.82,-0.57,-1.00,-0.06,0.94,-0.33,-0.79,-0.62,-0.79,0.62,0.94,0.33
Query data is for 25 kHz signal, SYNC data.

NOTE
Pair count is dependent on bandwidth and symbol type.
50 kHz bandwidth returns twice the number of data pairs as 25 kHz bandwidth.

Sync: 12 pair

Pilot: 24 pair

Header: 32 pair

Data: 204 pair

7.11.4 Constellation - Symbol Type

:CONStellation:TRACe:SYMbols
:CONStellation:TRACe:SYMbols?

Description: Set command Enables/Disables symbols on Constellation graph.
Query command returns parameter setting.

Parameter: Bitmask
0x01 = Sync
0x02 = Pilot
0x04 = Data
0x08 = Header

Default Value: 15 (All symbols enabled)

Set/Query Format: Decimal

Example: :CONStellation:TRACe:SYMbols 5
Enables Sync and Pilot symbols.

Query Response: :CONStellation:TRACe:SYMbols?
5

NOTE
At least one symbol must be enabled to obtain valid constellation query data.

7.12 MAGNITUDE ERROR GRAPH

7.12.1 Magnitude Error - Live Trace

:MAGnitude:TRACe:LIVE?

Description: Command returns Magnitude Error trace data.

Query Data: <statusbyte>,<#readings>,<ascii data string>

statusbyte (NR1): 0 = Invalid
1 = Valid

 # (NR1): indicates number of readings to follow, number depends bandwidth

25 kHz: 272

50 kHz: 544

100 kHz: 1088

0 kHz: 1632

data (NR2): trace readings

Query Response: :MAGnitude:TRACe:LIVE?

(valid) 1,544,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.38,0.00,3.61,0.00,0.86,0.00,2.62,0.13,0.00,0.47,0.00,3.20,0.00,3.95,0.00,0.20,2.18,1.25,0.70,1.16,0.86,.....

Query Response: :MAGnitude:TRACe:LIVE?

(invalid) 0,0.00

7.12.2 Magnitude Error - Lower Limit Value

:MAGnitude:TRACe:LOWer:LIMit
:MAGnitude:TRACe:LOWer:LIMit?

Description: Set command defines Lower Limit Value for Magnitude Error graph.
Query command returns parameter setting.

Range: -25 to +25%

Units: %

Default Value: -25%

Set/Query Format: NRf | NR2

Example: :MAGnitude:TRACe:LOWer:LIMit 0
Sets Lower Limit Value for Magnitude Error graph to 0%.

Query Response: :MAGnitude:TRACe:LOWer:LIMit?
0

7.12.3 Magnitude Error - Marker Coupling

:MAGnitude:TRACe:MARKER:COUPling
:MAGnitude:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :MAGnitude:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :MAGnitude:TRACe:MARKER:COUPling?
1

NOTE
Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

7.12.4 Magnitude Error - Marker Enable

:MAGnitude:TRACe:MARKn:ENABle
:MAGnitude:TRACe:MARKn:ENABle?

Description: Set command Enables/Disables Markers for Magnitude Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :MAGnitude:TRACe:MARK2:ENABle ON
Enables Marker 2 for Magnitude Error graph.

Query Response: :MAGnitude:TRACe:MARK2:ENABle?
1

NOTE
MARKn = 1 or 2 (Marker 1 or 2).

7.12.5 Magnitude Error - Marker Delta X

:MAGnitude:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :MAGnitude:TRACe:MARKER:DELTa:X?
225

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

7.12.6 Magnitude Error - Marker Delta Y

:MAGnitude:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :MAGnitude:TRACe:MARKER:DELTa:Y?
0.5008578300

NOTE Marker 1 and Marker 2 must both be enabled to return valid data.

7.12.7 Magnitude Error - Marker Position

:MAGnitude:TRACe:MARKn:XPOS
:MAGnitude:TRACe:MARKn:XPOS?

Description: Set command defines specified Marker position on Magnitude Error graph. Query command returns parameter setting.

Range: bandwidth dependent (see below)

25 kHz: 0 to 271

50 kHz: 0 to 543

100 kHz 0 to 1087

150 kHz: 0 to 1631

Units:

Default Value: 0

Set/Query Format: NRf | NR2

Example: :MAGnitude:TRACe:MARK2:XPOS 150
Positions Marker 2 at 150.

Query Response: :MAGnitude:TRACe:MARK2:XPOS?
150

NOTE MARKn = 1 or 2 (Marker 1 or 2).

7.12.8 Magnitude Error - Marker Query Y Value

:MAGnitude:TRACe:MARKn:YVALue?

Description: Query command returns Magnitude Error Y value for specified Marker.

Query Data: <statusbyte>,<value>

<statusbyte>: 0 = Invalid
1 = Valid

value (NR2): reading at marker

Query Response: :MAGnitude:TRACe:MARK2:YVALue?
1, 0.00

NOTE MARKn = 1 or 2 (Marker 1 or 2). Marker must be enabled to return valid data.

7.12.9 Magnitude Error - Trace Mode (Single or Continuous)

:MAGnitude:TRACe:REPEat
:MAGnitude:TRACe:REPEat?

Description: Set command sets trace mode on Magnitude Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :MAGnitude:TRACe:REPEat OFF
Sets Magnitude Error Graph to acquire a single trace.

Query Response: :MAGnitude:TRACe:REPEat?
0

7.12.10 Magnitude Error - Upper Limit Value

:MAGnitude:TRACe:UPPer:LIMit
:MAGnitude:TRACe:UPPer:LIMit?

Description: Set command defines Lower Limit Value for Magnitude Error graph.
Query command returns parameter setting.

Range: -25 to +25%

Units: %

Default Value: +25%

Set/Query Format: NRf | NR2

Example: :MAGnitude:TRACe:UPPer:LIMit 10
Sets Upper Limit Value for Magnitude Error graph to 10%.

Query Response: :MAGnitude:TRACe:UPPer:LIMit?
10

7.13 PHASE ERROR GRAPH

7.13.1 Phase Error - Live Trace

:PHASe:TRACe:LIVE?

Description: Command returns Phase Error trace data.

Query Data: <statusbyte>,<#readings>,<ascii data string>

statusbyte (NR1): 0 = Invalid
1 = Valid

 # (NR1): indicates number of readings to follow, number depends bandwidth

25 kHz: 272

50 kHz: 544

100 kHz: 1088

0 kHz: 1632

data (NR2): trace readings

Query Response: :PHASe:TRACe:LIVE?

(valid) 1,544,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.75,0.00,-1.29,0.00,-2.48,0.00,0.28,-2.34,0.00,-0.22,0.00,-0.11,0.00,1.63,0.00,1.93,-0.65,-0.63,-0.17,0.55,-2.48,0.12,-0.29,-1.79,0.42,0.08,-0.14,1.07,2.36,1.64,2.41,-0.44,1.35,0.18,0.38,-1.58,-1.77,0.57,-1.48,-0.15,0.25,0.29,0.64,-0.04,-4.41,

Query Response: :PHASe:TRACe:LIVE?

(invalid) 0,0.00

7.13.2 Phase Error - Lower Limit Value

:PHASe:TRACe:LOWer:LIMit
:PHASe:TRACe:LOWer:LIMit?

Description: Set command defines Lower Limit Value for Vector Error graph.
Query command returns parameter setting.

Range: -15 to +15%

Units: %

Default Value: -15%

Set/Query Format: NRf | NR2

Example: :PHASe:TRACe:LOWer:LIMit 5
Sets Lower Limit Value for Vector Error graph to 5%.

Query Response: :PHASe:TRACe:LOWer:LIMit?
5

7.13.3 Phase Error - Marker Coupling

:PHASe:TRACe:MARKER:COUPling
:PHASe:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :PHASe:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :PHASe:TRACe:MARKER:COUPling?
1

NOTE
Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

7.13.4 Phase Error - Marker Delta X

:PHASe:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PHASe:TRACe:MARKER:DELTa:X?
125

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

7.13.5 Phase Error - Marker Delta Y

:PHASe:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PHASe:TRACe:MARKER:DELTa:Y?
2.0387158394

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

7.13.6 Phase Error - Marker Position

:PHASe:TRACe:MARKn:XPOS
:PHASe:TRACe:MARKn:XPOS?

Description: Set command defines specified Marker position on Phase Error graph.
Query command returns parameter setting.

Range: bandwidth dependent (see below)

25 kHz: 0 to 271
50 kHz: 0 to 543
100 kHz 0 to 1087
150 kHz: 0 to 1631

Units: symbol position

Default Value: 0

Set/Query Format: NRf | NR2

Example: :PHASe:TRACe:MARK2:XPOS 150
Positions Marker 2 at 150.

Query Response: :PHASe:TRACe:MARK2:XPOS?
150

NOTE MARKn = 1 or 2 (Marker 1 or 2).

7.13.7 Phase Error - Marker Query Y Value

:PHASe:TRACe:MARKn:YVALue?

Description: Query command returns Phase Error Y value for specified Marker.

Query Data: <statusbyte>,<value>

<statusbyte>: 0 = Invalid
1 = Valid

value (NR2): reading at marker

Query Response: :PHASe:TRACe:MARK2:YVALue?
0.03

NOTE MARKn = 1 or 2 (Marker 1 or 2). Marker must be enabled to return valid data.

7.13.8 Phase Error - Trace Mode (Single or Continuous)

:PHASe:TRACe:REPEat
:PHASe:TRACe:REPEat?

Description: Set command sets trace mode on Phase Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :PHASe:TRACe:REPEat OFF
Sets Phase Error Graph to acquire a single trace.

Query Response: :PHASe:TRACe:REPEat?
0

7.13.9 Phase Error - Upper Limit Value

:PHASe:TRACe:UPPer:LIMit
:PHASe:TRACe:UPPer:LIMit?

Description: Set command defines Lower Limit Value for Phase Error graph.
Query command returns parameter setting.

Range: -15 to +15%

Units: %

Default Value: +15%

Set/Query Format: NRf | NR2

Example: :PHASe:TRACe:UPPer:LIMit 10
Sets Upper Limit Value for Phase Error graph to 10%.

Query Response: :PHASe:TRACe:UPPer:LIMit?
10

7.14 POWER PROFILE FULL

7.14.1 Power Over Bursts - Trace Enable

:PBURst:TRACe:ENABle
:PBURst:TRACe:ENABle?

Description: Set command Enables/Disables Power Over Bursts trace.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :PBURst:TRACe:ENABle ON
Enables Power Over Bursts trace.

Query Response: :PBURst:TRACe:ENABle?
1

NOTE Trace must be enabled (ON) to return valid data.

7.14.2 Power Over Bursts - Marker Delta X

:PBURst:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PBURst:TRACe:MARKER:DELTa:X?
5.0

NOTE Marker 1 and Marker 2 must both be enabled to return valid data.

7.14.3 Power Over Bursts - Marker Delta Y

:PBURst:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :PBURst:TRACe:MARKER:DELTa:Y?
0.167

NOTE Marker 1 and Marker 2 must both be enabled to return valid data.

7.14.4 Power Over Bursts - Marker Coupling

:PBURst:TRACe:MARKER:COUPling
:PBURst:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :PBURst:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :PBURst:TRACe:MARKER:COUPling?
1

NOTE
Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

7.14.5 Power Over Bursts - Marker Position

:PBURst:TRACe:MARKn:XPOS
:PBURst:TRACe:MARKn:XPOS?

Description: Set command defines Marker position on Power Over Bursts graph.
Query command returns parameter setting.

Range: 0 to 14.167 ms

Units: ms

Default Value: 0.0 ms

Set/Query Format: NRf | NR2

Example: :PBURst:TRACe:MARK2:XPOS 10ms
Positions Marker 2 for Slot 1 to 10 ms.

Query Response: :PBURst:TRACe:MARK2:XPOS?
10.0

NOTE
MARKn = 1 or 2 (Marker 1 or 2)

7.14.6 Power Over Bursts - Marker Y Value Query

:PBURst:TRACe:MARKn:YVALue?

Description: Command returns Power Over Bursts Y value for Marker.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Invalid
1 = Valid
2 = Inaccurate

value (NR2): dBm

Query Response: :PBURst:TRACe:MARK2:YVALue?
1,10.44

NOTE
MARKn = 1 or 2 (Marker 1 or 2)
Marker must be enabled to return valid data.

7.14.7 Power Over Bursts - Trace Data Query

:PBURst:TRACe:LIVE?

Description: Command returns Power Over Bursts graph data.

Query Data: <statusbyte>,<#pairs>,<x data>,<y data>

statusbyte (NR1): 0 = Invalid
1 = Valid
2 = Inaccurate

#pairs (NR1): Number of x,y coordinate pairs to follow

x, y data (NR2): coordinate value

Query Response: :PBURst:TRACe:LIVE?
1,931,0.00,2.63,0.02,-2.24,0.03,-11.90,0.05,.....

NOTE Trace must be enabled (ON) to return valid data.

7.14.8 Power Over Bursts - Trace Mode (Single or Continuous)

:PBURst:TRACe:REPEat
:PBURst:TRACe:REPEat?

Description: Set command sets trace mode on Power Over Bursts graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :PBURst:TRACe:REPEat OFF
Sets Power Over Bursts Graph to acquire a single trace.

Query Response: :PBURst:TRACe:REPEat?
0

7.15 VECTOR ERROR GRAPH

7.15.1 Vector Error - Live Trace

:VECtor:TRACe:LIVE?

Description: Command returns Vector Error trace data.

Query Data: <statusbyte>,<#readings>,<ascii data string>

statusbyte (NR1): 0 = Invalid
1 = Valid

 # (NR1): indicates number of readings to follow, number depends bandwidth

25 kHz: 272

50 kHz: 544

100 kHz: 1088

0 kHz: 1632

data (NR2): trace readings

Query Response: :VECtor:TRACe:LIVE?
(valid) 1,272,-1.00,-0.82,-0.87,0.76,0.76,-0.87,-0.82,-1.00....

Query Response: :VECtor:TRACe:LIVE?
(invalid) 0,0.00

7.15.2 Vector Error - Lower Limit Value

:VECtor:TRACe:LOWer:LIMit
:VECtor:TRACe:LOWer:LIMit?

Description: Set command defines Lower Limit Value for Vector Error graph.
Query command returns parameter setting.

Range: 0 to 20%

Units: %

Default Value: 0%

Set/Query Format: NRf | NR2

Example: :VECtor:TRACe:LOWer:LIMit 5
Sets Lower Limit Value for Vector Error graph to 5%.

Query Response: :VECtor:TRACe:LOWer:LIMit?
5

7.15.3 Vector Error - Marker Coupling

:VECtor:TRACe:MARKER:COUPling
:VECtor:TRACe:MARKER:COUPling?

Description: Set command locks spacing between Marker 1 and Marker 2.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :VECtor:TRACe:MARKER:COUPling ON
Locks Marker 1 and Marker 2 together.

Query Response: :VECtor:TRACe:MARKER:COUPling?
1

NOTE
Marker 1 and Marker 2 must be enabled for command to be valid.
When markers are locked they are clipped to prevent either marker from being re-positioned off of the plot field.

7.15.4 Vector Error - Marker Delta X

:VECtor:TRACe:MARKER:DELTa:X?

Description: Query command returns the difference between the Marker 1 and Marker 2 positions.

Query Format: NR1

Query Response: :VECtor:TRACe:MARKER:DELTa:X?
125

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

7.15.5 Vector Error - Marker Delta Y

:VECtor:TRACe:MARKER:DELTa:Y?

Description: Query command returns the difference between the readings at Marker 1 and Marker 2 positions.

Query Format: NR2

Query Response: :VECtor:TRACe:MARKER:DELTa:Y?
0.9528354406

NOTE
Marker 1 and Marker 2 must both be enabled to return valid data.

7.15.6 Vector Error - Marker Enable

:VECtor:TRACe:MARKn:ENABle
:VECtor:TRACe:MARKn:ENABle?

Description: Set command Enables/Disables Markers for Vector Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :VECtor:TRACe:MARK2:ENABle ON
Enables Marker 2 for Vector Error graph.

Query Response: :VECtor:TRACe::MARK2:ENABle?
1

NOTE MARKn = 1 or 2 (Marker 1 or 2).

7.15.7 Vector Error - Marker Position

:VECtor:TRACe:MARKn:XPOS
:VECtor:TRACe:MARKn:XPOS?

Description: Set command defines specified Marker position on Vector Error graph.
Query command returns parameter setting.

Range: bandwidth dependent (see below)

25 kHz: 0 to 271

50 kHz: 0 to 543

100 kHz 0 to 1087

150 kHz: 0 to 1631

Units: symbol position

Default Value: 0

Set/Query Format: NRf | NR2

Example: :VECtor:TRACe:MARK2:XPOS 150.
Positions Marker 2 at 150.

Query Response: :VECtor:TRACe:MARK2:XPOS?
150

NOTE MARKn = 1 or 2 (Marker 1 or 2).

7.15.8 Vector Error - Marker Query Y Value

:VECtor:TRACe:MARKn:YVALue?

Description: Query command returns Vector Error Y value for specified Marker.

Query Data: <statusbyte>,<value>

<statusbyte>: 0 = Invalid
1 = Valid

value (NR2): reading at marker

Query Response: :VECtor:TRACe:MARK2:YVALue?
1,2.74

NOTE MARKn = 1 or 2 (Marker 1 or 2). Marker must be enabled to return valid data.

7.15.9 Vector Error - Trace Mode (Single or Continuous)

:VECtor:TRACe:REPEat
:VECtor:TRACe:REPEat?

Description: Set command sets trace mode on Vector Error graph.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1
ON = Continuous Trace
OFF = Single Trace

Default Value: ON

Set/Query Format: Boolean

Example: :VECtor:TRACe:REPEat OFF
Sets Vector Error Graph to acquire a single trace.

Query Response: :VECtor:TRACe:REPEat?
0

7.15.10 Vector Error - Upper Limit Value

:VECtor:TRACe:UPPer:LIMit
:VECtor:TRACe:UPPer:LIMit?

Description: Set command defines Upper Limit Value for Vector Error graph.
Query command returns parameter setting.

Range: 0 to 20%

Units: %

Default Value: 20%

Set/Query Format: NRf | NR2

Example: :VECtor:TRACe:UPPer:LIMit 10
Sets Upper Limit Value for Vector Error graph to 10%

Query Response: :VECtor:TRACe:UPPer:LIMit?
10

Chapter 8 - TETRA DM Remote Commands

8.1 INTRODUCTION

This chapter lists the Remote Commands for configuring TETRA DM System Parameters. Remote Commands are listed alphabetically under the following Display Tile headings:

8.2 AUDIO TILE

8.2.1 AF Generators - Enable

:AF:GENerator:SOURceN:ENABle
:AF:GENerator:SOURceN:ENABle?

Description:	Set command Enables/Disables the specified AF Generator. Query command returns parameter setting.
Parameter:	OFF | ON | 0 | 1
Default Value:	OFF
Set/Query Format:	Boolean
Example:	:AF:GENerator:SOURce2:ENABle ON Enables AF Generator 2.
Query Response:	:AF:GENerator:SOURce2:ENABle? 1
NOTE	SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

8.2.2 AF Generators - Frequency

:AF:GENerator:SOURceN:FREQuency
:AF:GENerator:SOURceN:FREQuency?

Description: Set command defines the frequency source for the specified AF Generator. Query command returns parameter setting.
Range: 1.0 Hz to 20.0 kHz
Units: Hz | kHz
Default Value:
AF 1: 1.0 kHz
AF 2: 300.0 Hz
AF 3: 3.4 kHz
Set/Query Format: NRf | NR2 (Hz)
Example: :AF:GENerator:SOURce3:FREQuency 15kHz
Sets AF Generator 3 Frequency to 15.0 kHz.
Query Response: :AF:GENerator:SOURce3:FREQuency?
15000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

8.2.3 AF Generators - Level

:AF:GENerator:SOURceN:LEVel
:AF:GENerator:SOURceN:LEVel? <units>

Description: Set command defines the Source Level for the specified AF Generator. Query command returns parameter setting in specified units.
Range: 1.0 mV to 5.0 Vrms
Units: dBm | V | mV | µV | nV | dBµV
Default Value: 100.0 mV
Set/Query Format: NRf | NR2 (mV)
Example: :AF:GENerator:SOURce1:LEVel 5V
Sets AF Generator 1 Level (Amplitude) to 5.0 Volts.
Query Response: :AF:GENerator:SOURce1:LEVel? nV
50000000000.0

NOTE SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

8.2.4 AF Generators - Waveform

:AF:GENerator:SOURceN:SHAPe
:AF:GENerator:SOURceN:SHAPe?

Description: Set command defines the Waveform for the specified AF Generator.
Query command returns parameter setting.

Parameter: SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF

Query Data: SNR | SINE | SQUare | TRIangle | RAMP | DCS | DCSINV | DTMF | TONESEQ | TONEREM

Default Value: SINE

Set/Query Format: CPD | CRD

Example: :AF:GENerator:SOURce2:SHAPe SQUare
Sets AF Generator 2 Waveform shape to Square.

Query Response: :AF:GENerator:SOURce2:SHAPe?
SQU

NOTE

SourceN = 1, 2 or 3 (AF Generator 1, 2 or 3)

DTMF waveform is only valid on AF Generator 1. AF Generator 2 is unavailable when DTMF is selected on AF Generator 1.

DCS and DCSINV are not supported on AF Generator 3.

AF Generator 1 is unavailable as a modulation source when Normal MOD SNR Noise Measurements are defined (:CONFigure:MOD:ANALyzer:SNR:MODE 1) and AF:GENerator:SOURce1:SHAPe? returns SNR.

8.2.5 AF Measurements - AF Level Audio Units

:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts
:CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?

Description: Set command defines the unit of measure for AF Audio Level measurement.
Query command returns parameter setting.

Parameter: V | dBr | dBV | dBm | W

Default Value: V

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts DBR
Displays AF Level Audio measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:AUDio:UNIts?
DBR

8.2.6 AF Measurements - AF Level Balanced Units

:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts
:CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?

Description: Set command defines the unit of measure for AF Balanced Level measurement.
Query command returns parameter setting.

Parameter: dBm | dBr | V

Default Value: dBm

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts DBR
Displays AF Balanced Level measurement in dBr.

Query Response: :CONFigure:AF:ANALyzer:LEVel:BALanced:UNIts?
DBR

NOTE AF Measurement Source must be defined as BALANCED for command to be valid.

8.2.7 AF Measurements - Impedance Audio 1

:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?

Description: Set command defines the Impedance for Audio 1 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD UNBHI
Sets selected Audio 1 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD1:LOAD?
INBHI

NOTE Sets Impedance of Audio 1 Input connector whether or not Audio 1 is defined as Audio Source.

8.2.8 AF Measurements - Impedance Audio 2

:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD
:CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?

Description: Set command defines the Impedance for Audio 2 input connector.
Query command returns parameter setting.

Parameter: UNBHI | UNB600

Default Value: UNB600

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD UNBHI
Sets selected Audio 2 Impedance to Unbalanced Hi-Z.

Query Response: :CONFigure:AF:ANALyzer:SOURce:AUD2:LOAD?
INBHI

NOTE Sets Impedance of Audio 2 Input connector whether or not Audio 2 is defined as Audio Source.

8.2.9 AF Measurements - Filter Type

:AF:ANALyzer:MFILter
:AF:ANALyzer:MFILter?

Description: Set command selects the Audio Analyzer Post Detection Filter.
Query command returns parameter setting.

Parameter: PSOPh | None | LP1 | LP2 | LP3 | LP4 | LP5 | LP6 | LP7 | HP1 | HP2 | HP3 | BP0 | BP1 | BP2 | BP3 | BP4 | BP5 | BP6 | BP7 | BP8 | BP9 | BP10 | BP11 | BP12 | BP13 | BP14 | BP15 | BP16

where:

NONE = No Filter	BP2 = 0.3 to 5.0 kHz BP
PSOPh = Psoph (CMESS or CCITT)	BP3 = 0.3 to 20.0 kHz BP
LP1 = 300.0 Hz LP	BP4 = 0.3 to 15.0 kHz BP
LP2 = 5.0 kHz LP	BP5 = 0.02 to 300.0 Hz BP
LP3 = 20.0 kHz LP	BP6 = 0.02 to 3.0 kHz BP
LP4 = 15.0 kHz LP	BP7 = 0.02 to 3.4 kHz BP
LP5 = 3.0 kHz LP	BP8 = 0.02 to 5.0 kHz BP
LP6 = 625.0 kHz LP*	BP9 = 0.02 to 15.0 kHz BP
LP7 = 10.0 kHz LP*	BP10 = 0.02 to 20.0 kHz BP
LP8 = 100.0 Hz LP*	BP11 = 0.05 to 300.0 Hz BP
HP1 = 300.0 Hz HP**	BP12 = 0.05 to 3.0 kHz BP
HP2 = 20.0 Hz HP	BP13 = 0.05 to 3.4 kHz BP
HP3 = 50.0 Hz HP	BP14 = 0.05 to 5.0 kHz BP
BP0 = 0.3 to 3.0 kHz BP	BP15 = 0.05 to 15.0 kHz BP
BP1 = 0.3 to 3.4 kHz BP	BP16 = 0.05 to 20.0 kHz BP

Default Value: NONE (No Filter)

Set/Query Format: CPD | CRD

Example: :AF:ANALyzer:MFILter LP3
Selects 20.0 kHz Low Pass Filter for AF measurements.

Query Response: :AF:ANALyzer:MFILter?
LP3

NOTE

Filter selected should be appropriate for signal received from UUT.
When PSOPH is selected, Filter weight is defined using :CONFigure:AF:MFILter command.
Test Set does not process any commands following this one until this command is completed.
*LP6, LP7 and LP8 are used by the Audio Analyzer Tracking Generator and can not be defined by user, but may be returned as query data.
**When HP1 (300 Hz HP) is selected, CONFigure:AF:HZ300FILter selects the type of 300 Hz filter being used.

8.2.10 AF Measurements - Source

:CONFigure:AF:ANALyzer:SOURce
:CONFigure:AF:ANALyzer:SOURce?

Description: Set command defines the Source for Audio Analyzer.
Query command returns parameter setting.

Parameter: AUD1 | AUD2 | BAL | MIC

Default Value: AUD1

Set/Query Format: CPD | CRD

Example: :CONFigure:AF:ANALyzer:SOURce MIC
Selects Microphone as the AF Analyzer Audio Source.

Query Response: :CONFigure:AF:ANALyzer:SOURce?
MIC

NOTE Test Set does not process any commands following this one until this command is completed.

8.2.11 AF Measurements - Query AF Frequency Measurement

:FETCh:AF:ANALyzer:FREQuency?

Description: Command returns AF Frequency measurement data.

Query Data: <statusbyte>, <avgcount>, <avg>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

avgcount (NR1): value

avg (NR2): Hz

Query Response: :FETCh:AF:ANALyzer:FREQuency?
0,25,1000.0

NOTE Statusbyte may return more than one condition as a bitmask.

8.2.12 AF Measurements - Query AF Level Measurement

:FETCh:AF:ANALyzer:LEVel?

Description: Command returns AF Level measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<units>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1):
0 = All limit checks passed
1 = Average upper failed limit
2 = Average lower failed limit

avgcount (NR1): value

avg (NR2):
mV (Unbalanced)
dBm (Balanced)

units (NR1):
6 = dBm
7 = V
11 = W
12 = mW
13 = µW
16 = dBr
17 = dBV
20 = nW

Query Response: :FETCh:AF:ANALyzer:LEVel?
0,0,1,0.002

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

8.2.13 AF Measurements - Query AF Sinad Measurement

:FETCh:AF:ANALyzer:SINad?

Description: Command returns AF Sinad measurement data.

Query Data: <statusbyte>,<failbyte>,<avgcount>,<avg>,<wc>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and Inaccurate
7 = Settling, Inaccurate and Invalid

failbyte (NR1): 0 = All limit checks passed
2 = Average lower failed limit
8 = Worst Case lower failed limit

avgcount (NR1): value

avg, wc (NR2): dB

Query Response: :FETCh:AF:ANALyzer:SINad?
0,0,25,0.01,0.00

NOTE Statusbyte and Failbyte may return more than one condition as a bitmask.

8.2.14 Loudspeaker

:CONFigure:PORT:LOUDspeaker
:CONFigure:PORT:LOUDspeaker?

Description: Set command selects Loudspeaker port.
Query command returns parameter setting.

Parameter: OFF | AUDio | FAUDio | DEMod | DDEMod | FDEMod | FDDEMod

Default Value: OFF

Set/Query Format: CPD | CRD

Example: :CONFigure:PORT:LOUDspeaker AUDio
Selects Audio as the Loudspeaker port.

Query Response: :CONFigure:PORT:LOUDspeaker?
AUD

8.3 CALL TIMERS CONFIGURATION

8.3.1 Call Timers - Test Set Quiet Time

:CONFigure:CTIMers:QUIEt
:CONFigure:CTIMers:QUIEt?

Description: Set command defines Test Set Quiet Time.
Query command returns parameter setting.

Range: 0 to 30 seconds

Units: seconds

Default: 2 seconds

Set/Query Format: NRf | NR1

Example: :CONFigure:CTIMers:QUIEt 15
Sets Test Set Quiet Time to 15 seconds.

Query Response: :CONFigure:CTIMers:QUIEt?
15

8.3.2 Call Timers - Test Set Reservation Time

:CONFigure:CTIMers:TSRT
:CONFigure:CTIMers:TSRT?

Description: Set command defines Test Set Reservation Time.
Query command returns parameter setting.

Range: 0 to 378 frames

Units: frames

Default: 90 frames (5.1 seconds)

Set/Query Format: NR1

Example: :CONFigure:CTIMers:TSRT 200
Sets Test Set Reservation Time to 200 frames.

Query Response: :CONFigure:CTIMers:TSRT?
200

8.3.3 Call Timers - Test Set Talkback Call Time Buffer

:CONFigure:CTIMers:TALKback
:CONFigure:CTIMers:TALKback?

Description: Set command defines Talkback Call Time Buffer.
Query command returns parameter setting.

Range: 1 to 30 seconds

Units: seconds

Default Value: 2 seconds

Set/Query Format: NRf | NR1

Example: :CONFigure:CTIMers:TALKback 10
Sets TalkBack Call Time Buffer to 10 seconds.

Query Response: :CONFigure:CTIMers:TALKback?
10

8.3.4 Call Timers - Test Set Transmit Mode

:CONFigure:CTIMers:MODE
:CONFigure:CTIMers:MODE?

Description: Set command defines Test Set Transmit Mode of operation.
Query command returns parameter setting.

Parameter: NONe | TIMed | CONTinuous

Default Value: Timed

Set/Query Format: CPD | CRD

Example: :CONFigure:CTIMers:MODE CONTINUOUS
Sets Test Set Transmit Mode to Continuous.

Query Response: :CONFigure:CTIMers:MODE?
CONT

8.3.5 Call Timers - Test Set Transmit Time

:CONFigure:CTIMers:TSTRansmit
:CONFigure:CTIMers:TSTRansmit?

Description: Set command defines Test Set Transmit Time.
Query command returns parameter setting.

Range: 1 to 30 seconds

Units: seconds

Default: 2 seconds

Set/Query Format: NRf | NR1

Example: :CONFigure:CTIMers:TSTRansmit 20
Sets Test Set Transmit Time to 20 seconds.

Query Response: :CONFigure:CTIMers:TSTRansmit?
20

8.4 CALL TYPES CONFIGURATION - EMERGENCY CALL

8.4.1 Emergency Call - Call Participant

:CONFigure:CTYPe:EMERgency:GI
:CONFigure:CTYPe:EMERgency:GI?

Description: Set command defines Emergency Call participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Group

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:EMERgency:GI GROup
Sets Emergency Calls to Group call.

Query Response: :CONFigure:CTYPe:EMERgency:GI?
GRO

8.4.2 Emergency Call - Calling Party SSI

:CONFigure:CTYPe:EMERgency:SSI
:CONFigure:CTYPe:EMERgency:SSI?

Description: Set command defines Emergency Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:EMERgency:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:EMERgency:SSI?
123456

8.4.3 Emergency Call - Calling Party TPNI

:CONFigure:CTYPe:EMERgency:TPNI
:CONFigure:CTYPe:EMERgency:TPNI?

Description: Set command defines Emergency Calling Party TPNI.
Query command returns parameter setting.

Parameter: NINCluded | INCLuded

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:EMERgency:TPNI INCLUDED
Includes Calling Party TPNI in call.

Query Response: :CONFigure:CTYPe:EMERgency:TPNI?
INCL

8.4.4 Emergency Call - Presence Check

:CONFigure:CTYPe:EMERgency:PRESence?

Description: Command returns Emergency Calling Party Presence Check setting.

Query Data: CHECked | NCHecked

Query Response: :CONFigure:CTYPe:EMERgency:PRESence?
CHEC

8.5 CALL TYPES CONFIGURATION - GROUP CALL

8.5.1 Group Call - Calling Party SSI

:CONFigure:CTYPe:GROup:SSI
:CONFigure:CTYPe:GROup:SSI?

Description: Set command defines Group Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:GROup:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:GROup:SSI?
123456

8.5.2 Group Call - Calling Party TPNI

:CONFigure:CTYPe:GROup:TPNI
:CONFigure:CTYPe:GROup:TPNI?

Description: Set command defines Group Calling Party TPNI.
Query command returns parameter setting.

Parameter: NINCluded | INCLuded

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:GROup:TPNI INCLUDED
Includes Calling Party TPNI in call.

Query Response: :CONFigure:CTYPe:GROup:TPNI?
INCL

8.5.3 Group Call - Priority Setting

:CONFigure:CTYPe:GROup:PRIority
:CONFigure:CTYPe:GROup:PRIority?

Description: Set command defines Group Call Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:CTYPe:GROup:PRIority 1
Sets Group Call Priority setting to 1 (High).

Query Response: :CONFigure:CTYPe:GROup:PRIority?
1

8.6 CALL TYPES CONFIGURATION - OPEN GROUP CALL

8.6.1 Open Group Call - Calling Party SSI

:CONFigure:CTYPe:OGRP:SSI
:CONFigure:CTYPe:OGRP:SSI?

Description: Set command defines Open Group Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:OGRP:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:OGRP:SSI?
123456

8.6.2 Open Group Call - Calling Party TPNI

:CONFigure:CTYPe:OGRP:TPNI
:CONFigure:CTYPe:OGRP:TPNI?

Description: Set command defines Open Group Calling Party TPNI.
Query command returns parameter setting.

Parameter: NINCluded | INCLuded

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:OGRP:TPNI INCLUDED
Includes Calling Party TPNI in call.

Query Response: :CONFigure:CTYPe:OGRP:TPNI?
INCL

8.6.3 Open Group Call - Network

:CONFigure:CTYPe:OGRP:NETWork
:CONFigure:CTYPe:OGRP:NETWork?

Description: Set command defines Open Group Network setting.
Query command returns parameter setting.

Parameter: MOBile | OPEN

Default Value: MOBile

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:OGRP:NETWork MOBILE
Sets Open Group Network setting to Mobile.

Query Response: :CONFigure:CTYPe:OGRP:NETWork?
MOB

8.6.4 Open Group Call - Priority Setting

:CONFigure:CTYPe:OGRP:PRIority
:CONFigure:CTYPe:OGRP:PRIority?

Description: Set command defines Open Group Call Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:CTYPe:OGRP:PRIority 1
Sets Open Group Call Priority setting to 1 (High).

Query Response: :CONFigure:CTYPe:OGRP:PRIority?
1

8.7 CALL TYPES CONFIGURATION - PRIVATE CALL

8.7.1 Private Call - Calling Party SSI

:CONFigure:CTYPe:PRIVate:SSI
:CONFigure:CTYPe:PRIVate:SSI?

Description: Set command defines Private Calling Party SSI.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:CTYPe:PRIVate:SSI 123456
Sets Calling Party SSI to 123456.

Query Response: :CONFigure:CTYPe:PRIVate:SSI?
123456

8.7.2 Private Call - Calling Party TPNI

:CONFigure:CTYPe:PRIVate:TPNI
:CONFigure:CTYPe:PRIVate:TPNI?

Description: Set command defines Private Calling Party TPNI.
Query command returns parameter setting.

Parameter: NINCluded | INCLuded

Default Value: Not Included

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:PRIVate:TPNI INCLUDED
Includes Calling Party TPNI in call.

Query Response: :CONFigure:CTYPe:PRIVate:TPNI?
INCL

8.7.3 Private Call - Presence Check

:CONFigure:CTYPe:PRIVate:PRESence
:CONFigure:CTYPe:PRIVate:PRESence?

Description: Set command defines Private Calling Party Presence Check.
Query command returns parameter setting.

Parameter: CHECked | NCHecked

Default Value: Checked

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:PRIVate:PRESence CHECKED
Includes Presence Check in call.

Query Response: :CONFigure:CTYPe:PRIVate:PRESence?
CHEC

8.7.4 Private Call - Priority Setting

:CONFigure:CTYPe:PRIVate:PRIority
:CONFigure:CTYPe:PRIVate:PRIority?

Description: Set command defines Private Call Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:CTYPe:PRIVate:PRIority 1
Sets Private Call Priority setting to 1 (High).

Query Response: :CONFigure:CTYPe:PRIVate:PRIority?
1

8.8 CHANNEL PLAN CONFIGURATION

8.8.1 Channel Plan - Channel Plan Information

:CONFigure:CHPLan:INFO?

Description: Command returns information about current Channel Plan.

Query Data: <plan_name>,<frequency band>,<offset>,<duplex spacing>,
<reverse operation>,<block 1 lowest channel>,<block 1 highest channel>,
<block 1 lowest channel downlink freq>,<block 1 duplex offset>,
<block 1 channel spacing>,<block 2 state>,<block 2 lowest channel>,
<block 2 highest channel>,<block 2 lowest channel downlink freq>,
<block 2 duplex offset>,<block 2 channel spacing>

Plan Name: ascii string

Frequency Band: NR1

Offset: NR1 (Hz)

Duplex Spacing: NR1 (Hz)

Reverse Operation: NR1

Lowest Channel: NR1 (Hz)

Highest Channel: NR1

Low Ch DLink Freq: NR1

Duplex Offset: NR1 (Hz)

Channel Spacing: NR1 (Hz)

Block 2 State: CRD

Query Response: :CONFigure:CHPLan:INFO?
"TETRA 380-400 +12.5",3,3,0,0,3600,3999,390012500,100000000,2500,
EXCL,0,0,0,0,0

8.8.2 Channel Plan - Delete Channel Plan

:CONFigure:CHPLan:DELete

Description: Command deletes specified custom Channel Plan.

Parameter: ascii string

Example: :CONFigure:CHPLan:DELete "test_plan"
Deletes Channel Plan named 'test_plan'.

Query Response: no query

NOTE Command only applies to customized Channel Plans: Pre-defined Channel Plans can not be deleted.

8.8.3 Channel Plan - Load Channel Plan

:CONFigure:CHPLan:LOAD
:CONFigure:CHPLan:LOAD?

Description: Set command loads named plan as current Channel Plan.
Query command returns name of Channel Plan currently loaded.

Parameter: file name

Default Value: TETRA 380-400 +12.5

Set/Query Format: ascii string | ascii response data

Example: :CONFigure:CHPLan:LOAD “TETRA 380-400 ZERO”
Loads TETRA 380-400 ZERO Channel Plan.

Query Response: :CONFigure:CHPLan:LOAD?
TETRA 380-400 ZERO

NOTE
Plan names are case sensitive.
Plan name must be enclosed in double quotes for command to be valid.

8.8.4 Channel Plan - New Channel Plan

:CONFigure:CHPLan:NEW

Description: Command creates new Channel Plan.

Parameters: <plan_name>,<frequency band>,<offset>,<duplex spacing>,<reverse operation>,<block 1 data>,<block 2 data>

		Parameter/Range	Format	Default
	Plan Name	20 character max	ascii string	
System Info	**Freq Band**	0 to 15	NR1	
	Offset	0 to 3	NR1	
	Duplex Spacing	0 to 7	NR1	
	Reverse Operation	0 | 1	NR1	
Block 1	**Lowest Channel**	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies
Block 2	**State**	INCL | EXCL	CPD	varies
	Lowest Channel	0 to 4095	NR1	varies
	Highest Channel	0 to 4095	NR1	varies
	Low Ch Downlink Freq	100.0 kHz to 2.71 GHz	NR1	varies
	Duplex Offset	-100.0 to +100.0 MHz	NR1	varies
	Channel Spacing	-5.0 to -500.0 kHz +5.0 to +500.0 kHz	NR1	varies

Example: :CONFigure:CHPlan:NEW
“test_plan”,3,3,0,0,3600,3999,390012500,100000000,2500,EXCL,0,0,0,0,0

NOTE
Default values vary according to selected Channel Plan.
no query

8.9 MESSAGES CONFIGURATION - HEX MESSAGE

8.9.1 Hex Message - Call Participant

:CONFigure:MESSage:HEX:GI
:CONFigure:MESSage:HEX:GI?

Description: Set command defines Hex Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:HEX:GI GROup
Sets Hex Message to Group call.

Query Response: :CONFigure:CTYPe:HEX:GI?
GRO

8.9.2 Hex Message - Calling Party SSI

:CONFigure:MESSage:HEX:SSI
:CONFigure:MESSage:HEX:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 - HEX Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:HEX:SSI 123456
Sets Calling Party SSI for Hex Message to 123456.

Query Response: :CONFigure:MESSage:HEX:SSI?
123456

8.9.3 Hex Message - Initialize Message Length

:CONFigure:MESSage:HEX:INITialize

Description: Command initializes SDS Type 4 - HEX Message Type to selected length message.

Parameter: LONG | MEDium | SHORt

Default Long: 82020101 Hex followed by "This SDS type 4 message in hex, was sent by the Test Set and is one hundred and twenty characters long and ends here”

Default Medium: 82020101 Hex followed by "A medium length 67 hex character message sent from the Test Set"

Default Short: 82020101 Hex followed by "A short hex message"

Set Format: CPD

Example: :CONFigure:MESSage:HEX:INITialize SHORt
Sends pre-defined short message.

8.9.4 Hex Message - Message Data

:CONFigure:MESSage:HEX:DATA
:CONFigure:MESSage:HEX:DATA?

Description: Set command defines SDS Type 4 - HEX Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: 82020101 Hex followed by "This SDS type 4 message in hex, was sent by the Test Set and is one hundred and twenty characters long and ends here"

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:HEX:DATA
“546869732069732061207465737420 6D6573736167652E”
Defines message content as “This is a test message”.

Query Response: :CONFigure:MESSage:HEX:DATA?
“546869732069732061207465737420 6D6573736167652E”

8.9.5 Hex Message - Priority Setting

:CONFigure:MESSage:HEX:PRIority
:CONFigure:MESSage:HEX:PRIority?

Description: Set command defines Hex Message Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:MESSage:HEX:PRIority 1
Sets Hex Message Priority setting to 1 (High).

Query Response: :CONFigure:MESSage:HEX:PRIority?
1

8.10 MESSAGES CONFIGURATION - OTHER MESSAGE

8.10.1 Other SDS-TL - Type 4 Message - Call Participant

:CONFigure:MESSage:OTHer:GI
:CONFigure:MESSage:OTHer:GI?

Description: Set command defines SDS Type 4 Other Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:OTHer:GI GROup
Sets SDS Type 4 Other Message to Group call.

Query Response: :CONFigure:CTYPe:OTHer:GI?
GRO

8.10.2 Other SDS-TL - Type 4 Message - Calling Party SSI

:CONFigure:MESSage:OTHer:SSI
:CONFigure:MESSage:OTHer:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 Other Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:OTHer:SSI 123456
Sets Calling Party SSI for SDS Type 4 Other Message to 123456.

Query Response: :CONFigure:MESSage:OTHer:SSI?
123456

8.10.3 Other SDS-TL - Type 4 Message - Error Protection

:CONFigure:MESSage:OTHer:EPRotection
:CONFigure:MESSage:OTHer:EPRotection?

Description: Set command defines SDS Type 4 Other Message Error Protection.
Query command returns parameter setting.

Parameter: NREQuested | REQuested

Default Value: Requested

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:OTHer:EPRotection REQuested
Sets SDS Type 4 Other Message Error Protection to Requested.

Query Response: :CONFigure:MESSage:OTHer:EPRotection?
REQ

8.10.4 Other SDS-TL - Type 4 Message - Initialize Message Length

:CONFigure:MESSage:OTHer:INITialize

Description: Set command initializes SDS Type 4 Other Message Type to selected length message.

Parameter: LONG | MEDium | SHORt

Default Long: 01 Hex followed by hex encoding of "This SDS type 4 other message in hex was sent by the Test Set and is one hundred and twenty characters long ending here"

Default Medium: 01 Hex followed by hex encoding of "A medium length SDS4 66 character message sent fromthe Test Set”

Default Short: 01 Hex followed by hex encoding of "A short SDS4 message"

Set Format: CPD

Example: :CONFigure:MESSage:OTHer:INITialize SHORt
Sends pre-defined short message.

8.10.5 Other SDS-TL - Type 4 Message - Message Data

:CONFigure:MESSage:OTHer:DATA
:CONFigure:MESSage:OTHer:DATA?

Description: Set command defines SDS Type 4 Other Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: 01 Hex followed by hex encoding of "This SDS type 4 other message in hex was sent by the Test Set and is one hundred and twenty characters long ending here"

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:OTHer:DATA
“546869732069732061207465737420 6D6573736167652E”
Defines message content as “This is a test message.”

Query Response: :CONFigure:MESSage:OTHer:DATA?
“546869732069732061207465737420 6D6573736167652E”

8.10.6 Other SDS-TL Type 4 Message - Priority Setting

:CONFigure:MESSage:OTHer:PRIority
:CONFigure:MESSage:OTHer:PRIority?

Description: Set command defines SDS Type 4 Other Message Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:MESSage:OTHer:PRIority 1
Sets SDS Type 4 Other Message Priority setting to 1 (High).

Query Response: :CONFigure:MESSage:OTHer:PRIority?
1

8.10.7 Other SDS-TL - Type 4 Message - Protocol Identifier

:CONFigure:MESSage:OTHer:PIDentifier
:CONFigure:MESSage:OTHer:PIDentifier?

Description: Set command defines Protocol Identifier.
Query command returns parameter setting.
Range: 130 to 254
Default Value: 130 Decimal
Set/Query Format: NR1
Example: :CONFigure:MESSage:OTHer:PIDentifier 200
Query Response: :CONFigure:MESSage:OTHer:PIDentifier?
200

8.10.8 Other SDS-TL - Type 4 Message - Report Size

:CONFigure:MESSage:OTHer:RSIZe
:CONFigure:MESSage:OTHer:RSIZe?

Description: Set command defines Protocol Identifier.
Query command returns defined Protocol Identifier.
Parameter: SHORt | STANdard
Default Value: Standard
Set/Query Format: CPD | CRD
Example: :CONFigure:MESSage:OTHer:RSIZe STANDARD
Sets report size for Other message type to Standard.
Query Response: :CONFigure:MESSage:OTHer:RSIZe?
STAN

8.10.9 Other SDS-TL - Type 4 Message - Report Type

:CONFigure:MESSage:OTHer:RTYPe
:CONFigure:MESSage:OTHer:RTYPe?

Description: Set command defines Report Type.
Query command returns defined Report Type.
Parameter: NONe | RECeived | CONSumed | BOTH
Default Value: Received
Set/Query Format: CPD | CRD
Example: :CONFigure:MESSage:OTHer:RTYPe NONE
Sets report type for Other message type to NONe: no report is generated.
Query Response: :CONFigure:MESSage:OTHer:RTYPe?
NON

8.11 MESSAGES CONFIGURATION - SDS TYPE 1, 2 & 3 MESSAGE

8.11.1 SDS Type 1, 2 & 3 Message - Call Participant

:CONFigure:MESSage:SDS123:GI
:CONFigure:MESSage:SDS123:GI?

Description: Set command defines Type 1, 2 & 3 Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:SDS123:GI GROup
Sets Type 1, 2 & 3 Message to Group call.

Query Response: :CONFigure:CTYPe:SDS123:GI?
GRO

8.11.2 SDS Type 1, 2 & 3 Message - Calling Party SSI

:CONFigure:MESSage:SDS123:SSI
:CONFigure:MESSage:SDS123:SSI?

Description: Set command defines Calling Party SSI for SDS Type 1, 2 & 3 Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:SDS123:SSI 123456
Sets Calling Party SSI for Type 1, 2 & 3 Message to 123456.

Query Response: :CONFigure:MESSage:SDS123:SSI?
123456

8.11.3 SDS Type 1, 2 & 3 Message - Message Data 1

:CONFigure:MESSage:SDS123:DATA1
:CONFigure:MESSage:SDS123:DATA1?

Description: Set command defines SDS Type 1 Message content.
Query command returns parameter setting.

Parameter: hex-string, 2 char pairs max

Range: 0 to FFFF

Default Value: 5431

Set/Query Format: hex string

Example: :CONFigure:MESSage:SDS123:DATA1 “4849”
Sets SDS Type 1, 2 & 3 Message Data 1 to “Hi”.

Query Response: :CONFigure:MESSage:SDS123:DATA1?
4849

8.11.4 SDS Type 1, 2 & 3 Message - Message Data 2

:CONFigure:MESSage:SDS123:DATA2
:CONFigure:MESSage:SDS123:DATA2?

Description: Set command defines SDS Type 2 Message content.
Query command returns parameter setting.

Parameter: hex-string, 4 char pairs max

Range: 0 to FFFFFFFF

Default Value: 54595032

Set/Query Format: hex string

Example: :CONFigure:MESSage:SDS123:DATA2 “54657374”
Sets SDS Type 1, 2 & 3 Message Data 2 to “Test”.

Query Response: :CONFigure:MESSage:SDS123:DATA2?
54657374

8.11.5 SDS Type 1, 2 & 3 Message - Message Data 3

:CONFigure:MESSage:SDS123:DATA3
:CONFigure:MESSage:SDS123:DATA3?

Description: Set command defines SDS Type 3 Message content.
Query command returns parameter setting.

Parameter: hex-string, 8 char pairs max

Range: 0 to FFFFFFFFFFFFFFFF

Default Value: 5459504533534453

Set/Query Format: hex string

Example: :CONFigure:MESSage:SDS123:DATA3 “476F6F64627965”
Sets SDS Type 1, 2 & 3 Message Data 3 to “Goodbye”.

Query Response: :CONFigure:MESSage:SDS123:DATA3?
476F6F64627965

8.11.6 SDS Type 1, 2 & 3 Message - Priority Setting

:CONFigure:MESSage:SDS123:PRIority
:CONFigure:MESSage:SDS123:PRIority?

Description: Set command defines SDS Type 1, 2 & 3 Message Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:MESSage:SDS123:PRIority 1
Sets SDS Type 1, 2 & 3 Message Priority setting to 1 (High).

Query Response: :CONFigure:MESSage:SDS123:PRIority?
1

8.12 MESSAGES CONFIGURATION - SIMPLE TEXT MESSAGE

8.12.1 SDS Type 4 Simple Text Message - Call Participant

:CONFigure:MESSage:SIMPle:GI
:CONFigure:MESSage:SIMPle:GI?

Description: Set command defines SDS Type 4 Simple Text Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:SIMPle:GI GROup
Sets SDS Type 4 Simple Text Message to Group call.

Query Response: :CONFigure:CTYPe:SIMPle:GI?
GRO

8.12.2 SDS Type 4 Simple Text Message - Calling Party SSI

:CONFigure:MESSage:SIMPle:SSI
:CONFigure:MESSage:SIMPle:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 Simple Text Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:SIMPle:SSI 123456
Sets Calling Party SSI for Type 4 Simple Text message to 123456.

Query Response: :CONFigure:MESSage:SIMPle:SSI?
123456

8.12.3 SDS Type 4 Simple Text Message - Initialize Message Length

:CONFigure:MESSage:SIMPle:INITialize p

Description: Command Initializes SDS Type 4 Simple Text Message to selected length message.

Parameter: LONG | MEDium | SHORt

Long Default: "This SDS type 4 simple text message was sent by the Test Set and is one hundred and twenty characters long and ends here"

Medium Default: "A medium length simple 66 character message sent from the Test Set"

Short Default: "A short simple message"

Example: :CONFigure:MESSage:SIMPle:INITialize MEDIUM
Initializes Medium length Simple Text message.

8.12.4 SDS Type 4 Simple Text Message - Message Data

:CONFigure:MESSage:SIMPle:DATA
:CONFigure:MESSage:SIMPle:DATA?

Description: Set command defines SDS Type 4 Simple Text Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: "This SDS type 4 simple text message was sent by the Test Set and is one hundred and twenty characters long and ends here"

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:SIMPle:DATA “This is a test message”
Defines message content as “This is a test message”.

Query Response: :CONFigure:MESSage:SIMPle:DATA?
“This is a test message”

8.12.5 SDS Type 4 Simple Text Message - Priority Setting

:CONFigure:MESSage:SIMPle:PRIority
:CONFigure:MESSage:SIMPle:PRIority?

Description: Set command defines Simple Text Message Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:MESSage:SIMPle:PRIority 1
Sets Simple Text Message Priority setting to 1 (High).

Query Response: :CONFigure:MESSage:SIMPle:PRIority?
1

8.12.6 SDS Type 4 Simple Text Message - Text Coding

:CONFigure:MESSage:SIMPle:TCODing
:CONFigure:MESSage:SIMPle:TCODing?

Description: Set command defined type of Text Coding used in SDS Type 4 Simple Text Message.
Query command returns parameter setting.

Parameter: GSM7 | ISO1

Default Value: ISO1

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:SIMPle:TCODing GSM07
Sets Text Coding used in SDS Type 4 Simple Text Message to GSM07.

Query Response: :CONFigure:MESSage:SIMPle:TCODing?
GSM07

8.13 MESSAGES CONFIGURATION - STATUS MESSAGE

8.13.1 Status Message - Call Participant

:CONFigure:MESSage:STATus:GI
:CONFigure:MESSage:STATus:GI?

Description: Set command defines Hex Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:STATus:GI GROup
Sets Hex Message to Group call.

Query Response: :CONFigure:CTYPe:STATus:GI?
GRO

8.13.2 Status Message - Calling Party SSI

:CONFigure:MESSage:STATus:SSI
:CONFigure:MESSage:STATus:SSI?

Description: Set command defines Calling Party SSI for Status Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:STATus:SSI 123456
Sets Calling Party SSI for Hex Message to 123456.

Query Response: :CONFigure:MESSage:STATus:SSI?
123456

8.13.3 Status Message - Message Data

:CONFigure:MESSage:STATus:DATA
:CONFigure:MESSage:STATus:DATA?

Description: Set command defines Status Message content.
Query command returns parameter setting.

Parameter:

0 = Emergency	65273 = Scanning On
65024 = General Status Acknowledgement	65274 = Entry Request
65265 = Tx Inhibit On	65276 = Urgent Callback
65265 = Tx Inhibit Off	65277 = Selective Alert
65272 = Scanning Off	65279 = Callback Request

Default Value: 65279 (FEFF Hex Callback Request)

Set/Query Format: decimal

Example: :CONFigure:MESSage:STATus:DATA 65265
Sets Status Message to 65265 (Tx Inhibit Off).

Query Response: :CONFigure:MESSage:STATus:DATA?
65265

8.13.4 Status Message - Priority Setting

:CONFigure:MESSage:STATus:PRIority
:CONFigure:MESSage:STATus:PRIority?

Description: Set command defines Simple Text Message Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:MESSage:STATus:PRIority 1
Sets SDS Status Message Priority setting to 1 (High).

Query Response: :CONFigure:MESSage:STATus:PRIority?
1

8.14 MESSAGES CONFIGURATION - TL TEXT MESSAGE

8.14.1 SDS Type 4 TL-Text Message - Call Participant

:CONFigure:MESSage:TLText:GI
:CONFigure:MESSage:TLText:GI?

Description: Set command defines SDS Type 4 TL-Text Message participant type.
Query command returns parameter setting.

Parameter: INDividual | GROup

Default Value: Individual

Set/Query Format: CPD | CRD

Example: :CONFigure:CTYPe:TLText:GI GROup
Sets SDS Type 4 TL-Text Message to Group call.

Query Response: :CONFigure:CTYPe:TLText:GI?
GRO

8.14.2 SDS Type 4 TL-Text Message - Calling Party SSI

:CONFigure:MESSage:TLText:SSI
:CONFigure:MESSage:TLText:SSI?

Description: Set command defines Calling Party SSI for SDS Type 4 TL-Text Messages.
Query command returns parameter setting.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: number string

Example: :CONFigure:MESSage:TLText:SSI 123456
Sets Calling Party SSI for SDS Type 4 TL-Text Message to 123456.

Query Response: :CONFigure:MESSage:TLText:SSI?
123456

8.14.3 SDS Type 4 TL-Text Message - Error Protection

:CONFigure:MESSage:TLText:EPRotection
:CONFigure:MESSage:TLText:EPRotection?

Description: Set command defines SDS Type 4 TL Text Message Error Protection.
Query command returns parameter setting.

Parameter: NREQuested | REQuested

Default Value: Requested

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:EPRotection REQuested
Sets SDS Type 4 TL Text Message Error Protection to Requested.

Query Response: :CONFigure:MESSage:TLText:EPRotection?
REQ

8.14.4 SDS Type 4 TL-Text Message - Initialize Message Length

:CONFigure:MESSage:TLText:INITialize

Description: Set command initializes SDS Type 4 TL-Text Message Type to selected length message.

Parameter: LONG | MEDium | SHORt

Default Long: "This SDS type 4 SDS-TL text message was sent by the Test Set and is one hundred and twenty characters long and ends here"

Default Medium: "A medium length SDS-TL 66 character message sent from the Test Set"

Default Short: "A short SDS-TL message"

Set Format: CPD

Example: :CONFigure:MESSage:TLText:INITialize SHORt
Sends pre-defined short message.

8.14.5 SDS Type 4 TL-Text Message - Message Data

:CONFigure:MESSage:TLText:DATA
:CONFigure:MESSage:TLText:DATA?

Description: Set command defines SDS Type 4 TL-Text Message content.
Query command returns parameter setting.

Parameter: 120 bytes | 240 hex digits maximum

Default Value: "This SDS type 4 SDS-TL text message was sent by the Test Set and is one hundred and twenty characters long and ends here"

Set/Query Format: “hex string”

Example: :CONFigure:MESSage:TLText:DATA “This is a test message”
Defines message content as “This is a test message”.

Query Response: :CONFigure:MESSage:TLText:DATA?
“This is a test message”

8.14.6 SDS Type 4 TL-Text Message - Priority Setting

:CONFigure:MESSage:TLText:PRIority
:CONFigure:MESSage:TLText:PRIority?

Description: Set command defines TL Text Message Priority setting.
Query command returns parameter setting.

Parameter: 0 = Normal
1 = High
2 = Pre-Emptive
3 = Emergency

Default Value: 0 (Normal)

Set/Query Format: NR1

Example: :CONFigure:MESSage:TLText:PRIority 1
Sets TL Text Message Priority setting to 1 (High).

Query Response: :CONFigure:MESSage:TLText:PRIority?
1

8.14.7 SDS Type 4 TL-Text Message - Report Size

:CONFigure:MESSage:TLText:RSIZe
:CONFigure:MESSage:TLText:RSIZe?

Description: Set command defines Protocol Identifier.
Query command returns parameter setting.

Parameter: SHORt | STANdard

Default Value: Standard

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:RSIZe STANDARD
Sets report size for Other message type to Standard.

Query Response: :CONFigure:MESSage:TLText:RSIZe?
STAN

8.14.8 SDS Type 4 TL-Text Message - Report Type

:CONFigure:MESSage:TLText:RTYPe
:CONFigure:MESSage:TLText:RTYPe?

Description: Set command defines Protocol Identifier.
Query command returns parameter setting.

Parameter: NONe | RECeived | CONSumed | BOTH

Default Value: Received

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:RTYPe NONE
Sets report type for Other message type to NOne: no report is generated.

Query Response: :CONFigure:MESSage:TLText:RTYPe?
NONE

8.14.9 SDS Type 4 TL-Text Message - Text Coding

:CONFigure:MESSage:TLText:TCODing
:CONFigure:MESSage:TLText:TCODing?

Description: Set command defined type of Text Coding used in SDS Type 4 TL Text Message.
Query command returns parameter setting.

Parameter: GSM7 | ISO1

Default Value: ISO1

Set/Query Format: CPD | CRD

Example: :CONFigure:MESSage:TLText:TCODing GSM07
Sets Text Coding used in SDS Type 4 TL Text Message to GSM07.

Query Response: :CONFigure:MESSage:TLText:TCODing?
GSM07

8.15 MOBILE PARAMETERS CONFIGURATION

8.15.1 Mobile Parameters - GSSI Fixed Value

:CONFigure:MPARameter:GSSI:FIXed
:CONFigure:MPARameter:GSSI:FIXed?

Description: Set command defines Mobile GSSI Fixed Value.
Query command returns statusbyte.

Range: 0 to 16777215

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:MPARameter:GSSI:FIXed 5
Sets Mobile GSSI Fixed Value to 5.

Query Response: :CONFigure:MPARameter:GSSI:FIXed?

NOTE Mobile GSSI Mode must be set to Fixed for command to be valid (:CONFigure:MPARameter:GSSI:USAGe FIXED).

8.15.2 Mobile Parameters - GSSI Mode of Operation

:CONFigure:MPARameter:GSSI:USAGe
:CONFigure:MPARameter:GSSI:USAGe?

Description: Set command defines Fixed or Reported GSSI Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:GSSI:USAGe FIXED
Sets GSSI to use a fixed value.

Query Response: :CONFigure:MPARameter:GSSI:USAGe?
FIX

NOTE Mobile GSSI value is defined with :CONF:MPAR:GSSI:FIXed command.

8.15.3 Mobile Parameters - GSSI Reported Value

:CONFigure:MPARameter:GSSI:REPorted?

Description: Command returns Reported GSSI value.

Query Data: <statusbyte>

statusbyte (NR1): 0 = Valid
1 = Invalid

Query Response: :CONFigure:MPARameter:GSSI:REPorted?
0,-1

NOTE Mobile GSSI Mode must be set to Reported to return valid data (:CONFigure:MPARameter:GSSI:USAGe REPorted).

8.15.4 Mobile Parameters - Mobile Country Code Fixed Value

:CONFigure:MPARameter:MNI:MCC
:CONFigure:MPARameter:MNI:MCC?

Description: Set command defines Mobile Country Code Fixed Value.
Query command returns parameter setting.

Range: 0 to 999

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:MPARameter:MNI:MCC 234
Sets Mobile Country Code Fixed value to 234.

Query Response: :CONFigure:MPARameter:MNI:MCC?
234

NOTE Mobile MNI Mode must be set to Fixed for command to be valid (:CONFigure:MPARameter:MNI:USAGe FIXED).

8.15.5 Mobile Parameters - Mobile Country Code Reported Value

:CONFigure:MPARameter:MNI:MCC:REPorted?

Description: Command returns Reported Mobile Country Code.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

mcc value (NR1): 0 to 999

Query Response: :CONFigure:MPARameter:MNI:MCC:REPorted?
0,234

NOTE Mobile MNI Mode must be set to Reported to return valid data (:CONFigure:MPARameter:MNI:USAGe REPORTED).

8.15.6 Mobile Parameters - Mobile Network Code Fixed Value

:CONFigure:MPARameter:MNI:MNC
:CONFigure:MPARameter:MNI:MNC?

Description: Set command defines Mobile Network Code Fixed Value.
Query command returns parameter setting.

Range: 0 to 16383

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:MPARameter:MNI:MNC 75
Sets Mobile Network Code Fixed value to 75.

Query Response: :CONFigure:MPARameter:MNI:MNC?
75

NOTE Mobile MNI Mode must be set to Fixed for command to be valid (:CONFigure:MPARameter:MNI:USAGe FIXED).

8.15.7 Mobile Parameters - Mobile Network Code Reported Value

:CONFigure:MPARameter:MNI:MNC:REPorted?

Description: Command returns Reported Mobile Network Code.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

MNC value (NR1): 0 to 999

Query Response: :CONFigure:MPARameter:MNI:MNC:REPorted?
0,75

NOTE Mobile MNI Mode must be set to Reported to return valid data (:CONFigure:MPARameter:MNI:USAGe REPORTED).

8.15.8 Mobile Parameters - Mobile Network Identity Mode of Operation

:CONFigure:MPARameter:MNI:USAGe
:CONFigure:MPARameter:MNI:USAGe?

Description: Set command defines Fixed or Reported MNI Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:MNI:USAGe FIXED
Sets MNI to use a fixed value.

Query Response: :CONFigure:MPARameter:MNI:USAGe?
FIX

NOTE Mobile MNI Fixed values are defined using :CONFigure:MPARameter:MNI:MNC and :CONFigure:MPARameter:MNI:MCC Commands.

8.15.9 Mobile Parameters - Power Class Fixed Value

:CONFigure:MPARameter:PCLass:FIXed
:CONFigure:MPARameter:PCLass:FIXed?

Description: Set command defines Mobile Power Class Fixed Value.
Query command returns statusbyte.

Parameter: PC1 | PC2 | PC3 | PC4 | PC5

where: PC1 = 1/1L (45.0 dBm / 42.5 dBm)
PC2 = 2/2L (40.0 dBm / 37.5 dBm)
PC3 = 3/3L (35.0 dBm / 32.5 dBm)
PC4 = 4/4L (30.0 dBm / 27.5 dBm)
PC5 = 5/5L (25.0 dBm / 22.5 dBm)

Default Value: PC4

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:PCLass:FIXed PC2
Sets Mobile Power Class Fixed value to PC2 (40.0 dBm / 37.5 dBm).

Query Response: :CONFigure:MPARameter:PCLass:FIXed?
PC2

NOTE Power Class Mode must be set to FIXed for command to be valid (:CONFigure:MPARameter:PCLass:USAGe FIXED)

8.15.10 Mobile Parameters - Power Class Mode of Operation

:CONFigure:MPARameter:PCLass:USAGe
:CONFigure:MPARameter:PCLass:USAGe?

Description: Set command defines Fixed or Reported Power Class Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:PCLass:USAGe FIXED
Sets Power Class to use a fixed value.

Query Response: :CONFigure:MPARameter:PCLass:USAGe?
FIX

NOTE Fixed Power Class value is defined with :CONF:MPAR:PCL:FIXed command.

8.15.11 Mobile Parameters - Power Class Reported Value

:CONFigure:MPARameter:PCLass:REPorted?

Description: Command returns Reported Power Class value.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

pclass value (NR1): PC0 | PC1 | PC2 | PC3 | PC4 | PC6 | PC6 | PC7 | Empty - Invalid

Query Response: :CONFigure:MPARameter:PCLass:REPorted?
0,PC2

NOTE Power Class Mode must be set to Reported to return valid data (:CONFigure:MPARameter:PCLass:USAGe REPorted)

8.15.12 Mobile Parameters - SSI Fixed Value

:CONFigure:MPARameter:SSI:FIXed
:CONFigure:MPARameter:SSI:FIXed?

Description: Set command defines Mobile SSI Fixed Value.
Query command returns statusbyte.

Range: 0 to 16777215

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:MPARameter:SSI:FIXed 250
Sets Mobile SSI Fixed value to 250.

Query Response: :CONFigure:MPARameter:SSI:FIXed?
250

NOTE Mobile Parameter SSI Mode must be set to Fixed for command to be valid (:CONFigure:MPARameter:SSI:USAGe FIXed).

8.15.13 Mobile Parameters - SSI Mode of Operation

:CONFigure:MPARameter:SSI:USAGe
:CONFigure:MPARameter:SSI:USAGe?

Description: Set command defines Fixed or Reported SSI Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | REPorted

Default Value: Reported

Set/Query Format: CPD | CRD

Example: :CONFigure:MPARameter:SSI:USAGe FIXED
Sets SSI to use a fixed value.

Query Response: :CONFigure:MPARameter:SSI:USAGe?
FIX

NOTE Fixed SSI value is defined with :CONF:MPAR:SSI:USAG command.

8.15.14 Mobile Parameters - SSI Reported Value

:CONFigure:MPARameter:SSI:REPorted?

Description: Command returns Reported SSI value.

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid

value (NR1): reported value
Empty/Negative value = Invalid

Query Response: :CONFigure:MPARameter:SSI:REPorted?
0,B

NOTE

Mobile Parameter SSI Mode must be set to Reported to return valid data (:CONFigure:MPARameter:SSI:USAGe REPorted).

8.16 OFFSETS CONFIGURATION

8.16.1 RF Analyzer - Offset Enable

:CONFigure:OFFSet:ANALyzer:ENABle
:CONFigure:OFFSet:ANALyzer:ENABle?

Description: Set command Enables/Disables the RF Analyzer Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:ANALyzer:ENABle ON
Enables RF Analyzer Offset.

Query Response: :CONFigure:OFFSet:ANALyzer:ENABle?
1

8.16.2 RF Analyzer - Offset Value

:CONFigure:OFFSet:ANALyzer:VALue
:CONFigure:OFFSet:ANALyzer:VALue?

Description: Set command defines the RF Analyzer Offset Value.
Query command returns parameter setting.

Range: -40.0 to +40.0 dB

Units: dB

Default Value: 0.0 dB

Set/Query Format: NRf | NR2

Example: :CONFigure:OFFSet:ANALyzer:VALue -10dB
Sets RF Analyzer Offset to -10.0 dB.

Query Response: :CONFigure:OFFSet:ANALyzer:VALue?
-10.00

8.16.3 RF Generator - Offset Enable

:CONFigure:OFFSet:GENerator:ENABle
:CONFigure:OFFSet:GENerator:ENABle?

Description: Set command Enables/Disables RF Generator Offset.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: OFF

Set/Query Format: Boolean

Example: :CONFigure:OFFSet:GENerator:ENABle ON
Enables RF Generator Offset.

Query Response: :CONFigure:OFFSet:GENerator:ENABle?
1

8.16.4 RF Generator - Offset Value

:CONFigure:OFFSet:GENerator:VALue
:CONFigure:OFFSet:GENerator:VALue?

Description: Set command defines RF Generator Offset Value.
Query command returns parameter setting.
Range: -40.0 to +40.0 dB
Units: dB
Default Value: 0.0 dB
Set/Query Format: NRf | NR2
Example: :CONFigure:OFFSet:GENerator:VALue 2.5dB
Set RF Generator Offset to 2.5 dB.
Query Response: :CONFigure:OFFSet:GENerator:VALue?
2.5

8.16.5 Timing - Offset Enable

:CONFigure:OFFSet:TIMing:ENABle
:CONFigure:OFFSet:TIMing:ENABle?

Description: Set command Enables/Disables the Timing Offset.
Query command returns parameter setting.
Parameter: OFF | ON | 0 | 1
Default Value: OFF
Set/Query Format: Boolean
Example: :CONFigure:OFFSet:TIMing:ENABle ON
Enables Timing Offset.
Query Response: :CONFigure:OFFSet:TIMing:ENABle?
1

8.16.6 Timing - Offset Value

:CONFigure:OFFSet:TIMing:VALue
:CONFigure:OFFSet:TIMing:VALue?

Description: Set command defines the Timing Offset Value.
Query command returns parameter setting.
Range: -999.99 to +999.99 symbols
Units: symbols
Default Value: 0.0 symbols
Set/Query Format: NRf | NR2
Example: :CONFigure:OFFSet:TIMing:VALue -150
Sets TIming Offset to -150.00.
Query Response: :CONFigure:OFFSet:TIMing:VALue?
-150

8.17 TEST SET PARAMETERS CONFIGURATION

8.17.1 Test Set Parameters - Mobile Country Code

:CONFigure:TSParameters:MNI:MCC
:CONFigure:TSParameters:MNI:MCC?

Description: Set command defines Test Set Mobile Country Code.
Query command returns parameter setting.

Range: 0 to 999

Default Value: 1 (Test)

Set/Query Format: NR1

Example: :CONFigure:TSParameters:MNI:MCC 234
Sets Test Set MCC to 234 (United Kingdom).

Query Response: :CONFigure:TSParameters:MNI:MCC?
234

NOTE Test Set MNI mode must be set to FIXED for command to be valid (:CONFigure:TSParameters:MNI:USAGe FIXED).

8.17.2 Test Set Parameters - Mobile Network Code

:CONFigure:TSParameters:MNI:MNC
:CONFigure:TSParameters:MNI:MNC?

Description: Set command defines Test Set Mobile Network Code.
Query command returns parameter setting.

Range: 0 to 16383

Default Value: 1

Set/Query Format: NR1

Example: :CONFigure:TSParameters:MNI:MNC 395
Sets Test Set MNC to 395.

Query Response: :CONFigure:TSParameters:MNI:MNC?
395

NOTE Test Set MNI mode must be set to FIXED for command to be valid (:CONFigure:TSParameters:MNI:USAGe FIXED).

8.17.3 Test Set Parameters - Mobile Network Information Usage

:CONFigure:TSParameters:MNI:USAGe
:CONFigure:TSParameters:MNI:USAGe?

Description: Set command defines Fixed or Reported MNI Mode of operation is used.
Query command returns parameter setting.

Parameter: FIXed | MOBile

Default Value: Mobile

Set/Query Format: CPD | CRD

Example: :CONFigure:TSParameters:MNI:USAGe FIXED
Sets MNI to use a fixed value.

Query Response: :CONFigure:TSParameters:MNI:USAGe?
FIX

NOTE Test Set MNI MCC and MNC values are defined using :CONFigure:TSParameters:MNI:MCC and :CONFigure:TSParameters:MNI:MNC commands.

8.17.4 Test Set Parameters - Mobile Power Control Mode

:CONFigure:TSParameters:POWer:CONTrol
:CONFigure:TSParameters:POWer:CONTrol?

Description: Set command defines Mobile Power Control mode of operation.
Query command returns parameter setting.

Parameter: ALLow | NALLow

Default Value: Not Allowed

Set/Query Format: CPD | CRD

Example: :CONFigure:TSParameters:POWer:CONTrol NALLOWED
Sets Mobile Power Control to Not Allowed.

Query Response: :CONFigure:TSParameters:POWer:CONTrol?
NALL

8.17.5 Test Set Parameters - Power Class

:CONFigure:TSParameters:POWer:PCLass
:CONFigure:TSParameters:POWer:PCLass?

Description: Set command defines Test Set Mobile Power Class.
Query command returns parameter setting.

Parameter: PC1 | PC2 | PC3 | PC4 | PC5

where: PC1 = 1/1L (45.0 dBm / 42.5 dBm)
PC2 = 2/2L (40.0 dBm / 37.5 dBm)
PC3 = 3/3L (35.0 dBm / 32.5 dBm)
PC4 = 4/4L (30.0 dBm / 27.5 dBm)
PC5 = 5/5L (25.0 dBm / 22.5 dBm)

Default Value: PC4

Set/Query Format: CPD | CRD

Example: :CONFigure:TSParameters:POWer:PCLass PC2
Sets Test Set Mobile Power Class to PC2.

Query Response: :CONFigure:TSParameters:POWer:PCLass?
PC2

8.17.6 Test Set Parameters - Short Subscriber Identity

:CONFigure:TSParameters:SSI
:CONFigure:TSParameters:SSI?

Description: Set command defines Mobile SSI Fixed Value.
Query command returns statusbyte.

Range: 0 to 16777215

Default Value: 742200 (Test Set)

Set/Query Format: NR1

Example: :CONFigure:TSParameters:SSI 250
Sets Test Set SSI to 250.

Query Response: :CONFigure:TSParameters:SSI?
250

8.18 TX MEASUREMENTS LIMITS CONFIGURATION

8.18.1 Tx Measurements - Initialize Limits

:LIMits:TXMeas:INITialize:xxx

Description: Command Initializes Tx Measurement Limits as Normal or Extreme.

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Parameter: NORMal | EXTReme

Example: :LIMits:TXMeas:INITialize:SYNC NORMAL
Initializes Tx Measurement Limits for Sync Burst to Normal.

Query Response: no query

8.18.2 Tx Burst Power - Limit Enable

:LIMits:TXMeas:POWer:ENABle:xxx
:LIMits:TXMeas:POWer:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:POWer:ENABle:SYNC ON
Enables Limit for Tx Burst Power Measurements for Sync bursts.

Query Response: :LIMits:TXMeas:POWer:ENABle:SYNC?
1

8.18.3 Tx Burst Power - Limit Value

:LIMits:TXMeas:POWer:VALue:xxx
:LIMits:TXMeas:POWer:VALue:xxx?

Description: Set command defines Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Range: -9.9 to +9.9 dB

Units: dB

Default Values:

Default/Normal:

Upper Limit Value: +2.0 dB

Lower Limit Value: -2.0 dB

Extreme:

Upper Limit Value: +3.0 dB

Lower Limit Value: -4.0 dB

Set/Query Format: data string (NRf) | data string (NR2)

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:POWer:VALue:SYNC 5.0,-5.0
Sets Upper Limit Value for Tx Burst Power Measurements SYNC burst to 5.0 dB and Lower Limit for Tx Burst Power Measurements SYNC burst to -5.0 dB.

Query Response: :LIMits:TXMeas:POWer:VALue:SYNC?
5.0,-5.0

8.18.4 Tx Burst Timing - Limit Enable

:LIMits:TXMeas:BTIMing:ENABle:SLAVe
:LIMits:TXMeas:BTIMing:ENABle:SLAVe?

Description: Set command Enables/Disables Limit for Tx Burst Timing Slave Burst Measurements.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Example: :LIMits:TXMeas:BTIMing:ENABle:SLAVe ON
Enables Limit for Tx Burst Timing Salve Burst Measurements.

Query Response: :LIMits:TXMeas:BTIMing:ENABle:SLAVe?
1

NOTE Burst Timing only applies to Slave bursts.

8.18.5 Tx Burst Timing - Limit Value

:LIMits:TXMeas:BTIMing:VALue:SLAVe
:LIMits:TXMeas:BTIMing:VALue:SLAVe?

Description: Set command defines Limit for Tx Burst Timing Slave Burst Measurements.
Query command returns parameter setting.

Range: 0.1 to 9.99 symbols

Units: symbols

Default Values:

Default/Normal: 0.25 symbols

Extreme: 0.25 symbols

Set/Query Format: NRf | NR2

Example: :LIMits:TXMeas:BTIMing:VALue:SLAVe 2
Sets Limit for Tx Burst Timing Slave Burst Measurements to 2.0 symbols.

Query Response: :LIMits:TXMeas:BTIMing:VALue:SLAVe?
2.00

NOTE Burst Timing only applies to Slave bursts.

8.18.6 Tx Frequency Error - Limit Enable

:LIMits:TXMeas:FERRor:ENABle:xxx
:LIMits:TXMeas:FERRor:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Slave Bursts:

Default/Normal: ON

Extreme: OFF

Other Bursts:

Default/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:FERRor:ENABle:SYNC ON
Enables Limit for Tx Frequency Error Measurements for SYNC bursts.

Query Response: :LIMits:TXMeas:FERRor:ENABle:SYNC?
1

8.18.7 Tx Frequency Error - Limit Value

:LIMits:TXMeas:FERRor:VALue:xxx
:LIMits:TXMeas:FERRor:VALue:xxx?

Description: Set command defines Limit for Tx Frequency Error Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 1500.0 Hz

Units: Hz

Default Values:

Slave Bursts:

Default/Normal: 100.0 Hz

Extreme: 100.0 Hz

Other Bursts:

Default/Normal: 1.0 kHz

Extreme: 1.0 kHz

Set/Query Format: NRf | NR2

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:FERRor:VALue:SYNC 125Hz
Sets Limit Value for Tx Frequency Error Measurements SYNC burst to 125.0 Hz.

Query Response: :LIMits:TXMeas:FERRor:VALue:SYNC?
125.0

8.18.8 Tx Profile Power - Limit Enable

:LIMits:TXMeas:PROFile:ENABle:xxx
:LIMits:TXMeas:PROFile:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Profile Power Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: ON

Set/Query Format: Boolean

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:PROFile:ENABle:SYNC ON
Enables Limit for Tx Profile Power SYnc Burst Measurements.

Query Response: :LIMits:TXMeas:PROFile:ENABle:SYNC?
1

8.18.9 Tx Power Profile - Limit Value

:LIMits:TXMeas:PROFile:VALue:xxx
:LIMits:TXMeas:PROFile:VALue:xxx?

Description: Set command defines Limit for Tx Burst Power Measurements for specified burst type.
Query command returns parameter setting.

Range: -9.9 to +9.9 dB

Units: dB

Default Values:

Default/Normal:

Highest Power Level Upper: +2.0 dB
Highest Power Level Lower: -2.0 dB
Other Power Level Upper: +2.5 dB
Other Power Level Lower: -2.5 dB

Extreme:

Highest Power Level Upper: +3.0 dB
Highest Power Level Lower: -4.0 dB
Other Power Level Upper: +4.0 dB
Other Power Level Lower: -4.0dB

Set/Query Format: NRf | NR2

Burst Type (xxx): CONTrol | NORMal | CW

Example: :LIMits:TXMeas:POWer:VALue:NORMal 3,-3,5,-5
Sets Limit for Normal Tx Burst Power Measurements to the following:

Highest Power Level Upper: +3.0 dB
Highest Power Level Lower: -3.0 dB
Other Power Level Upper: +5.0 dB
Other Power Level Lower: -5.0 dB

Query Response: :LIMits:TXMeas:POWer:VALue:NORMal?
3.0,-3.0,5.0,-5.0

8.18.10 Tx Residual Carrier - Limit Enable

:LIMits:TXMeas:RCARrier:ENABle:xxx
:LIMits:TXMeas:RCARrier:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:RCARrier:ENABle:SYNC ON
Enables Limit for Tx Residual Carrier Sync Burst Measurements.

Query Response: :LIMits:TXMeas:RCARrier:ENABle:SYNC?
1

8.18.11 Tx Residual Carrier - Limit Value

:LIMits:TXMeas:RCARrier:VALue:xxx
:LIMits:TXMeas:RCARrier:VALue:xxx?

Description: Set command defines Limit for Tx Residual Carrier Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 5.0%

Extreme: 5.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:RCARrier:VALue:SYNC 10.0
Sets Limit Value for Tx Residual Carrier Sync Burst Measurements to 10.0%.

Query Response: :LIMits:TXMeas:RCARrier:VALue:SYNC?
10.0

8.18.12 Tx Vector Peak - Limit Enable

:LIMits:TXMeas:VPEak:ENABle:xxx
:LIMits:TXMeas:VPEak:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:VPEak:ENABle:SYNC ON
Enables Limit for Tx Vector Peak Sync Burst Measurements.

Query Response: :LIMits:TXMeas:VPEak:ENABle:SYNC?
1

8.18.13 Tx Vector Peak - Limit Value

:LIMits:TXMeas:VPEak:VALue:xxx
:LIMits:TXMeas:VPEak:VALue:xxx?

Description: Set command defines Limit for Tx Vector Peak Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 30.0%

Extreme: 30.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:VPEak:VALue:SYNC 15.0
Sets Limit for Tx Vector Peak Sync Burst Measurements to 15.0%.

Query Response: :LIMits:TXMeas:VPEak:VALue:SYNC?
15.0

8.18.14 Tx Vector RMS - Limit Enable

:LIMits:TXMeas:VRMS:ENABle:xxx
:LIMits:TXMeas:VRMS:ENABle:xxx?

Description: Set command Enables/Disables Limit for Tx Vector RMS Measurements for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Values:

Default/Normal: ON

Extreme: OFF

Set/Query Format: Boolean

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:VRMS:ENABle:SYNC ON
Enables Limit for Tx Vector RMS Sync Burst Measurements.

Query Response: :LIMits:TXMeas:VRMS:ENABle:SYNC?
1

8.18.15 Tx Vector RMS - Limit Value

:LIMits:TXMeas:VRMS:VALue:xxx
:LIMits:TXMeas:VRMS:VALue:xxx?

Description: Set command defines Limit for Tx Vector RMS Measurements for specified burst type.
Query command returns parameter setting.

Range: 0.1 to 99.9%

Units: % (percent)

Default Values:

Default/Normal: 10.0%

Extreme: 10.0%

Set/Query Format: NRf | NR2

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :LIMits:TXMeas:VRMS:VALue:SYNC 15.0
Sets Limit for Tx Vector RMS SYnc Burst Measurements to 15.0%.

Query Response: :LIMits:TXMeas:VRMS:VALue:SYNC?
15.0

8.19 MODULATION ACCURACY - MAGNITUDE ERROR

8.19.1 Magnitude Error - Measurement at Symbol

:FETCh:MACCuracy:MERRor:xxx? p

Description: Command returns Magnitude Error measurement for specified burst type at symbol point.

Parameter: symbol range: 0 to 235 (NR1)

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:MERRor:SYNC? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

8.19.2 Magnitude Error - Symbol Range

:FETCh:MACCuracy:MERRor:RANGe:xxx?

Description: Command returns Magnitude Error Symbol Range for specified burst type.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:MERRor:RANGe:SYNC? 50
0,-33,202

NOTE Statusbyte may return more than one condition as a bitmask.

8.20 MODULATION ACCURACY - PHASE ERROR

8.20.1 Phase Error - Measurement at Symbol

:FETCh:MACCuracy:PERRor:xxx? p

Description: Command returns Phase Error measurement for specified burst type at symbol point.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Parameter: symbol range: 0 to 235 (NR1)

Query Data: <statusbyte>,<value>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): degree

Query Response: :FETCh:MACCuracy:PERRor:SYNC? 50
0,3.13

NOTE Statusbyte may return more than one condition as a bitmask.

8.20.2 Phase Error - Symbol Range

:FETCh:MACCuracy:PERRor:RANGe:xxx?

Description: Command returns Phase Error Symbol Range Control or Normal Bursts.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:PERRor:RANGe:SYNC?
0,-33,202

NOTE Statusbyte may return more than one condition as a bitmask.

8.21 MODULATION ACCURACY - VECTOR ERROR

8.21.1 Vector Error - Measurement at Symbol

:FETCh:MACCuracy:VERRor:xxx? p

Description: Command returns Vector Error measurement for specified burst type at symbol point.

Parameter: symbol range: 0 to 235 (NR1)

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<value>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

value (NR2): %

Query Response: :FETCh:MACCuracy:VERRor:SYNC? 50
7,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

8.21.2 Vector Error - Symbol Range

:FETCh:MACCuracy:VERRor:RANGe:xxx?

Description: Command returns Vector Error Symbol Range for specified burst type.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:MACCuracy:VERRor:RANGe:SYNC? 50
0,-33,202

NOTE Statusbyte may return more than one condition as a bitmask.

8.22 OPERATIONS/STATUS

8.22.1 Protocol - Call Information

:PROTocol:CINFo?

Description: Command returns current Call Information.

Query Data: <statusbyte>,<source>,<addressing>,<encryption>,<priority>,<SSI>, <address extention>

statusbyte (NR1): 0 = Valid
1 = Invalid

source (ascii string): MOBILE ORIGINATED | MOBILE TERMINATED

addressing (ascii string): INDIVIDUAL | INDIVIDUAL PRESENCE | GROUP

encryption (ascii string): CLEARMODE | ENCRYPTED

priority response (NR1): 0 to 3

SSI (ascii string): 0 to 16777215

address extension (ascii string): ddd/ddddd or OPEN CHANNEL where d = decimal character

Query Response: :PROTocol:CINFo?
0,"MOBILE ORIGINATED","INDIVIDUAL","CLEARMODE",0,16777184,""

8.22.2 Protocol - Cleardown Call

:PROTocol:ACTion:CDOWn

Description: Command clears down call.

Parameter/Query: none

8.22.3 Protocol - Group Information

:PROTocol:GROup?

Description: Command returns Requested Group Information.

Query Data: <statusbyte>,<SSI>,<address extension>

statusbyte (NR1): 0 = Valid
1 = Invalid

SSI (NR1): 0 to 16777215

address extension (ascii string): ddd/ddddd or OPEN CHANNEL where d = decimal character

Query Response: :PROTocol:GROup?
1,1,""

NOTE Statusbyte may return more than one condition as a bitmask.

8.22.4 Protocol - Mobile Information

:PROTocol:MINFo?

Description: Command returns current Mobile Information.

Query Data: <statusbyte>,<true ssi>,<true address extension>,<psuedo ssi>,<psuedo address extension>,<power class>,<power control>,<encryption class>

statusbyte (NR1): 0 = Valid
1 = Invalid

true ssi (NR1): 0 to 16777215

true address extension (ascii string): ddd/ddddd where d = decimal character

psuedo ssi (NR1): 0 to 16777215

psuedo address extension (NR1): ddd/ddddd where d = decimal character

power class (ascii string): PC0 | PC1 | PC2 | PC3 | PC4 | PC5 | PC6

power control (ascii string): ALLOWED | NOT ALLOWED

encryption class (ascii string): DM-1 | DM-2A | DM-2B | DM-2C
empty = Invalid

Query Response: :PROTocol:MINFo?
0,1,'',1,'','','',''

8.22.5 Protocol - Place Emergency Call

:PROTocol:ACTion:CALL:EMERgency

Description: Command places and Emergency Call.

Parameter/Query: none

8.22.6 Protocol - Place Group Call

:PROTocol:ACTion:CALL:GROup

Description: Command places a Group Call.

Parameter/Query: none

8.22.7 Protocol - Place Open Group Call

:PROTocol:ACTion:CALL:OGRP

Description: Command places an Open Group Call.

Parameter/Query: none

8.22.8 Protocol - Place Private Call

:PROTocol:ACTion:CALL:PRIVate

Description: Command places a Private Call.

Parameter/Query: none

8.22.9 Protocol - Reset to Quiet

:PROTocol:ACTion:RESet

Description: Command resets Protocol to Quiet.

Parameter/Query: none

8.22.10 Protocol - Mode/Status

:PROTocol:MODE?

Description: Command returns current Protocol Mode/Status.

Query Data (CRD): QUIET CHANNEL
MOBILE OCCUPATION
TEST SET OCCUPATION (TEST TONE)
TEST SET OCCUPATION (TALKBACK)
TEST SET OCCUPATION (SILENCE)
MOBILE RESERVATION
TEST SET RESERVATION

Query Response: :PROTocol:MODE?
Quiet Channel

8.22.11 Protocol - Speech Traffic Channel Contents

:PROTocol:ACTion:TCHS
:PROTocol:ACTion:TCHS?

Description: Set command defines Speech Traffic Channel contents.
Query command returns parameter setting.

Parameter: TALK | SILence | TONE

Set/Query Format: CPD | CRD

Default Value: Talk

Example: :PROTocol:ACTion:TCHS TONE
Sets Speech Traffic Channel to Tone.

Query Response: :PROTocol:ACTion:TCHS?
TONE

8.22.12 Protocol - Reservation Countdown

:PROTocol:CDOWn?

Description: Command returns number of Reserved frames remaining.
Returns 0 when not in Reservation Mode.

Query Response: :PROTocol:CDOWn?
0

8.22.13 Protocol - Test Set Start Transmission

:PROTocol:ACTion:TSTX

Description: Command starts Test Set Transmission.

Parameter/Query: none

8.22.14 Protocol - Test Set Stop Transmission

:PROTocol:ACTion:TSTCease

Description: Command stops Test Set Transmission.

Parameter/Query: none

8.22.15 Send Message - Hex Message

:PROTocol:ACTion:MESSage:HEX

Description: Command sends Type 4 SDS Hex Message.

Parameter/Query: none

8.22.16 Send Message - SDS Other Message

:PROTocol:ACTion:MESSage:SDSTL:OTHer

Description: Command sends Other Type 4 SDS Message.

Parameter/Query: none

8.22.17 Send Message - SDS TL Text Message

:PROTocol:ACTion:MESSage:SDSTL:TLText

Description: Command sends SDS Text Message.

Parameter/Query: none

8.22.18 Send Message - Simple TL Text Message

:PROTocol:ACTion:MESSage:SIMPle:TLText

Description: Command sends Simple Text Message.

Parameter/Query: none

8.22.19 Send Message - Status Message

:PROTocol:ACTion:MESSage:STATus

Description: Command sends Status Message.

Parameter/Query: none

8.22.20 Send Message - SDS Type 1 Message

:PROTocol:ACTion:MESSage:STYP1

Description: Command sends Type SDS Type 1 Message.

Parameter/Query: none

8.22.21 Send Message - SDS Type 2 Message

:PROTocol:ACTion:MESSage:STYP2

Description: Command sends Type SDS Type 2 Message.

Parameter/Query: none

8.22.22 Send Message - SDS Type 3 Message

:PROTocol:ACTion:MESSage:STYP3

Description: Command sends Type SDS Type 3 Message.

Parameter/Query: none

8.23 POWER PROFILE FULL

8.23.1 Burst Power - Measurement at Symbol

:FETCh:POWer:SYMBol:xxx? p

Description: Command returns Profile at a Symbol for specified burst type.

Burst Type (xxx): MASTer | NORMal | SLAVe | SYNC

Parameter: symbol range: -35 to 265 (NR1)

Query Data: <parameter>,<statusbyte>,<sample count>,<power>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

power (NR2): dBc

Query Response: :FETCh:POWer:SYMBol:SYNC? 50
1,0,0.00

NOTE Statusbyte may return more than one condition as a bitmask.

8.23.2 Burst Power - Symbol Range

:FETCh:POWer:SYMBol:RANGe:xxx?

Description: Command returns Burst Power Symbol range for specified burst type.

Burst Type (xxx): MASTer | NORMal | SLAVe | SYNC

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:POWer:SYMBol:RANGe:SYNC?
0,-33,267

NOTE Statusbyte may return more than one condition as a bitmask.

8.24 POWER PROFILE FRAME

8.24.1 Profile Frame - Measurement Query

:FETCh:PFRame:xxx?

Description: Command returns Tx Power for specified burst type.

Burst Type (xxx): MASTer | NORMal | SLAVe | SYNC

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

sample count (NR1): value

avg (NR2): dBm

Query Response: :FETCh:PFRame:SYNC?
0,20,28.5

NOTE Statusbyte may return more than one condition as a bitmask.

8.24.2 Profile Frame - Symbol Range

:FETCh:PFRame:SYMBol:RANGe:xxx?

Description: Command returns Power Profile Symbol range for specified burst type.

Burst Type (xxx): MASTer | NORMal | SLAVe | SYNC

Query Data: <statusbyte>,<min>,<max>

statusbyte (NR1): 0 = Valid
1 = Invalid

min, max (NR1): symbol

Query Response: :FETCh:PFRame:SYMBol:RANGe:SYNC?
0,--27,1038

NOTE Statusbyte may return more than one condition as a bitmask.

8.25 PROTOCOL - SDS MESSAGES

8.25.1 Protocol - Message Event

:PROTocol:MESSage:EVENt?

Description: Command returns latest event Status Message

Query Data: ascii string

"Call setup timeout"
"Channel Busy Reported from Layer 2"
"Confirm SDS-TL report sent to MS"
"MO call setup complete"
"MO call setup with presence check"
"MO presence check, DM-CONNECT sent"
"MS rejected pre-emption"
"MS Reservation ended"
"MT call setup complete"
"MT Group call established"
"MT presence checked"
"Quiet Channel reset complete"
"Received SDS ACK OK from MS"
"Received SDS ACK (problem) from MS"
"Received SDS type 1 from MS""
"Received SDS type 2 from MS"
"Received SDS type 3 from MS"
"Received SDS type 4 from MS"
"Received Status message from MS"
"Received SDS-TL message from MS"
"Released, call lost"
"Released, call rejected"
"Released, cause unknown"
"Released, MS requested disconnect"
"Released, unsupported disconnect cause"
"Released, voice data setup failed"
"SDS-TL stan'd recvd report sent to MS"
"SDS-TL short recvd report sent to MS"
"SDS-TL not sent by TS, SDS busy"
"SDS-TL report received from MS"
"SDS-TL timed out waiting for report"
"SDS-TL timed out waiting for ack"
"SDS-TL report ack sent to MS"
"SDS-TL rec'd other delivery status"
"SDS-TL rec'd sht received rep't fm MS"
"SDS-TL rec'd sht consumed rep't fm MS"
"SDS-TL received unexpected msg number"
"SDS-TL received - failed error check"
"Test Set requested disconnect"
"Test Set has left the call"
"Timer expired"
"TS Reservation ended"
"Tx ceased, cause unknown"
"Tx ceased, user initiated"
"Tx ceased, gateway not supported!"
"Tx ceased, unsupported cause"
"Tx ceased, timer expired"
"Tx ceased, pre-empted"
"Tx ceased, Test Set tx pre-empted

Query Response: :PROTocol:MESSage:EVENt?
"Quiet Channel reset complete"

8.26 PROTOCOL - STATUS MESSAGES

8.26.1 Protocol - Message Status

:PROTocol:MESSage:STATus?

Description: Command returns last Status Message Received.

Query Data: <statusbyte>,<called ID_type>,<called ID number>,<message (hex)>,<message (decimal)>

statusbyte (NR1): 0 = Valid
1 = Invalid

called ID_type (ascii-string): SNA & xxx

called ID number (ascii-string): SSI & xxxxxxxx
TSI & xxx/xxxxx/xxxxxxxx where xxx... are decimal characters

message (hex string): 0 to FFFF

message (decimal): 0 to 65535

Query Response: :PROTocol:MESSage:STATus?
1,'',''

8.27 PROTOCOL - SDS MESSAGE

8.27.1 Protocol - SDS Message

:PROTocol:MESSage:SDS?

Description: Command returns Last SDS Message Received.

Query Data: <statusbyte>,<message_number>,<message type>,<encoding>,
<called ID_type>,<called ID number>,<service>,<report_type>,<message>

statusbyte (NR1): 0 = Valid
1 = Invalid

message_number (NR1): value

message type (ascii-string):

TYPE 1	TYPE 4 (SIMPLE PIN AUTH)
TYPE 2	TYPE 4 (SDS TL TEXT)
TYPE 3	TYPE 4 (SDS TL GPS)
TYPE 4 (SIMPLE OTAR)	TYPE 4 (SDS TL WAP)
TYPE 4 (SIMPLE TEXT)	TYPE 4 (SDS TL WCMP)
TYPE 4 (SIMPLE GPS)	TYPE 4 (SDS TL M DMO)
TYPE 4 (SIMPLE WAP)	TYPE 4 (USER DEFINED)
TYPE 4 (SIMPLE WCMP)	TYPE 4 (UNKNOWN xxx where is decimal message type
TYPE 4 (SIMPLE M-DMO)	

encoding (ascii-string): If message type is Type 4 (SDS TL TEXT) or (Simple TEXT):

7 BIT (GSM)	PC 737 GREEK II (8 BIT)
ISO 1 LATIN 1 (8 BIT)	PC 850 LATIN I (8 BIT)
ISO 2 LATIN 2 (8 BIT)	PC 852 LATIN II (8 BIT)
ISO 3 LATIN 3 (8 BIT)	PC 855 CYRILLIC I (8 BIT)
ISO 4 LATIN 4 (8 BIT)	PC 857 TURKISH (8 BIT)
ISO 5 CYRILLIC (8 BIT)	PC 860 PORTUGUESE (8 BIT)
ISO 6 ARABIC (8 BIT)	PC 861 ICELANDIC (8 BIT)
ISO 7 GREEK (8 BIT)	PC 863 CANADIAN (8 BIT)
ISO 8 HEBREW (8 BIT)	PC 865 NORDIC (8 BIT)
ISO 9 LATIN 5 (8 BIT)	PC 866 RUSSIAN (8 BIT)
ISO 10 LATIN 6 (8 BIT)	PC 869 GREEK (8 BIT)
ISO 13 LATIN 7 (8 BIT)	16 BIT (ISO UCS2)
ISO 14 LATIN 8 (8 BIT)	UNKNOWN (where xxx is decimal coding scheme
ISO 15 LATIN 0 (8 BIT)	
PC 437 USA (8 BIT)	

encoding (ascii-string): If "message type" is Type 4 (SDS TL GPS)
NMEA 0183
RTCM SC-104
TETRA LOCATOR (TLP)
UNKNOWN (xxx where xxx is decimal coding scheme

called ID type (ascii string): SNA & xxx

called ID number (ascii string): SSI & xxxxxxxx
TSI & xxx/xxxxx/xxxxxxxx
where xxx = decimal character

service (ascii-string): INDIVIDUAL | GROUP

report_type (ascii-string): RECEIVED | CONSUMED | RECEIVED AND CONSUMED | NONE

message (ascii-string): If message type is Type 1 - xxxx
If message type is Type 2 - xxxxxxxx
If message type is Type 3 - xxxxxxxxxxxxxxxx
If message type is Type 4 SDS-TL Text or Simple Text , 7 or 8 bit encoded -aaaaaaaaaaaaaaaa. Otherwise, xxxxxxxxxxxxxxxxx... where xxx... are hexadecimal characters and aaa... are ascii characters and invalid items are returned as empty strings.

Query :PROTocol:MESSage:SDS?
Response: 1,'','',''

8.28 RF SETTINGS

8.28.1 RF Analyzer - Automatic Gain Control

:RF:ANALyzer:AGC
:RF:ANALyzer:AGC?

Description: Set command Enables/Disables the AGC mode of operation.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:ANALyzer:AGC OFF
Disables Automatic Gain Control.

Query Response: :RF:ANALyzer:AGC?
0

8.28.2 RF Analyzer - Input Connector

:RF:ANALyzer:PORT
:RF:ANALyzer:PORT?

Description: Set command selects the RF Input Connector.
Query command returns parameter setting.

Parameter: TR | ANT

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:ANALyzer:PORT ANT
Selects Antenna Connector as RF Input Connector.

Query Response: :RF:ANALyzer:PORT?
ANT

NOTE Refer to 3900 Platform Specifications for maximum input values.

8.28.3 RF Analyzer - Power Level

:RF:ANALyzer:LEVel
:RF:ANALyzer:LEVel?

Description: Set command defines RF Analyzer Level.
Query command returns parameter setting.

Range: **Pre-Amp OFF**
T/R: -40.0 to +55.0 dBm in 5 dB steps
ANT: -80.0 to 0.0 dBm in 5 dB steps

Range: **Pre-Amp ON**
T/R: -50.0 to +45.0 dBm in 5 dB steps
ANT: -100.0 to -20.0 dBm in 5 dB steps

Units: dBm
Default Value: 40.0 dBm
Set/Query Format: NRf | NR2
Example: :RF:ANALyzer:LEVel -20dBm
Sets RF Analyzer Level to -20.0 dBm.
Query Response: :RF:ANALyzer:LEVel?
-20.0

8.28.4 RF Analyzer - Pre-Amplifier

:RF:ANALyzer:RECeiver:AMP
:RF:ANALyzer:RECeiver:AMP?

Description: Set command Enables/Disables Receiver Pre-Amplifier.
Query command returns On/Off state of Receiver Pre-AMP.
Parameter: OFF | ON | 0 | 1
Default Value: OFF
Set/Query Format: Boolean
Example: :RF:ANALyzer:RECeiver:AMP ON
Enables Receiver Pre-Amplifier.
Query Response: :RF:ANALyzer:RECeiver:AMP?
1

8.28.5 RF Analyzer - RF Channel

:RF:CHANnel[:NUMBer]
:RF:CHANnel[:NUMBer]?

Description: Set command defines RF Channel.
Query command returns parameter setting.
Range: defined be selected Channel Plan
Default Value: defined be selected Channel Plan
Set/Query Format: NR1
Example: :RF:CHANnel 3700
Sets RF Channel to 3700.
Query Response: :RF:CHANnel?
3700

8.28.6 RF Analyzer - RF Channel Uplink

:RF:CHANnel:UPLink
:RF:CHANnel:UPLink?

Description: Set command defines whether RF Channel serves as Uplink or Downlink channel.
Query command returns parameter setting.

Parameter: 0 = Downlink
1 = Uplink

Default Value: 1 (Uplink)

Set/Query Format: NR1

Example: :RF:CHANnel:UPLink 0
Sets RF Channel as Downlink Channel.

Query Response: :RF:CHANnel:UPLink?
0

8.28.7 RF Generator/Analyzer - Frequency

:RF:FREQuency
:RF:FREQuency?

Description: Set command defines RF Generator Frequency.
Query command returns parameter setting.

Range: 100.0 kHz to 2.71 GHz

Units: Hz | kHz | MHz | GHz

Default Value: 915.0125 MHz (TETRA 870-921 +12.5)
915.0 MHz (TETRA 870-921 ZERO)
420.0125 MHz (TETRA 410-430 +12.5)
420.0 MHz (TETRA 410-430 ZERO)
420.01875 MHz (TETRA 410-430 -6.25)
850.0125 MHz (TETRA 805-870 +12.5)
850.0 MHz (TETRA 805-870 ZERO)
460.0125 MHz (TETRA 450-470 +12.5)
460.0 MHz (TETRA 450-470 ZERO)
390.0125 MHz (TETRA 380-400 +12.5)
390.0 MHz (TETRA 380-400 ZERO)
380.0 MHz (No Channel Plan)

Set/Query Format: NRf | NR1 (Hz)

Example: :RF:FREQuency 400MHz
Sets RF Generator/Analyzer Frequency to 400.0 MHz.

Query Response: :RF:FREQuency?
400000000

NOTE Command only valid when No Plan is selected as Channel Plan.

8.28.8 RF Generator - Enable

:RF:GENerator:STATe
:RF:GENerator:STATe?

Description: Set command Enables/Disables RF Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:STATe ON
Enables RF Generator.

Query Response: :RF:GENerator:STATe?
1

8.28.9 RF Generator - Level

:RF:GENerator:LEVel
:RF:GENerator:LEVel?

Description: Set command defines RF Generator Level.
Query command returns parameter setting.

Range:
TR: -130.0 to -40.0 dBm
GEN: -130.0 to 0.0 dBm

Units: dBm

Default Value: -75.0 dBm

Set/Query Format: NRf | NR2

Example: :RF:GENerator:LEVel -40dBm
Sets RF Generator Level to -40.0 dBm.

Query Response: :RF:GENerator:LEVel?
-40.0

8.28.10 RF Generator - Modulator Enable

:RF:GENerator:MODulator
:RF:GENerator:MODulator?

Description: Set command Enables/Disables Modulation Generator.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Default Value: ON

Set/Query Format: Boolean

Example: :RF:GENerator:MODulator ON
Enables Modulation Generator.

Query Response: :RF:GENerator:MODulator?
1

8.28.11 RF Generator - Output Connector

:RF:GENerator:PORT
:RF:GENerator:PORT?

Description: Set command selects the RF Output Connector.
Query command returns parameter setting.

Parameter: TR | GEN

Default Value: TR

Set/Query Format: CPD | CRD

Example: :RF:GENerator:PORT GEN
Selects Generator Connector as RF Output Connector.

Query Response: :RF:GENerator:PORT?
GEN

8.29 TX MEASUREMENTS

8.29.1 Tx Measurements - Continuous Sweep

:INITiate:CONTinuous:TXMeas:xxx
:INITiate:CONTinuous:TXMeas:xxx

Description: Set command initiates Continuous Tx Measurement sweeps for specified burst type.
Query command returns parameter setting.

Parameter: OFF | ON | 0 | 1

Set/Query Format: Boolean

Default Value: ON

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :INITiate:CONTinuous:TXMeas:SYNC ON
Enables continuous Tx Measurement sweeps for SYNC burst.

Query Response: :INITiate:CONTinuous:TXMeas:SYNC?
1

8.29.2 Tx Measurements - Single Sweep

:INITiate:IMMediate:TXMeas:xxx

Description: Command initiates Single Tx Measurements sweep for specified burst type.

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Query: none

8.29.3 Tx Measurements - Stop Measurements

:ABORt:TXMeas:xxx

Description: Command stops Tx Measurements for specified burst type.

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Query: none

8.29.4 Burst Timing - Measurement Query

:FETCh:BTIMing:SLAVe?

Description: Command returns Burst Timing Slave Burst measurement.

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR2): symbols

Query Response: :FETCh:BTIMing:SLAVe
7,0,0,0.00,0.00,0.00,0.00

NOTE
Statusbyte may return more than one condition as a bitmask.
Burst Timing only applies to Slave bursts.

8.29.5 Burst Timing - Sample Count

:CONFigure:BTIMing:SAMPle:SLAVe
:CONFigure:BTIMing:SAMPle:SLAVe?

Description: Sets number of samples used to calculate Burst Timing Slave Burst measurement.
Query command returns parameter setting.

Range: 1 to 250

Set/Query Format: NR1

Default Value: 20

Example: :CONFigure:BTIMing:SAMPle:SLAVe 50
Sets number of sample used to calculate Burst Timing Slave burst measurements to 50.

Query Response: :CONFigure:BTIMing:SAMPle:SLAVe?
50

NOTE
Burst Timing only applies to Slave bursts.

8.29.6 Frequency Error - Measurement Query

:FETCh:MACCuracy:FERRor:xxx?

Description: Command returns Frequency Error measurement for specified burst type.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>,<wc>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
8 = Worst case value failed limit

sample count (NR1): value

avg, max, min, wc (NR2): Hz

Query Response: :FETCh:MACCuracy:FERRor:SYNC?
7,0,0,0.0,0.0,0.0,0.0

NOTE Statusbyte may return more than one condition as a bitmask.

8.29.7 Frequency Error - Sample Count

:CONFigure:MACCuracy:FERRor:SAMPle:xxx
:CONFigure:MACCuracy:FERRor:SAMPle:xxx?

Description: Sets number of samples used to calculate Frequency Error measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :CONFigure:MACCuracy:FERRor:SAMPle:SYNC 50
Sets number of samples used to calculate Frequency Error SYNC Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:FERRor:SAMPle:SYNC?
50

8.29.8 Residual Carrier - Measurement Query

:FETCh:MACCuracy:RCARrier:xxx?

Description: Command returns Residual Carrier measurement for specified burst type.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:RCARrier:SYNC?
0,0,20,0.1,0.1

NOTE Statusbyte may return more than one condition as a bitmask.

8.29.9 Residual Carrier - Sample Count

:CONFigure:MACCuracy:RCARrier:SAMPle:xxx
:CONFigure:MACCuracy:RCARrier:SAMPle:xxx?

Description: Sets number of samples used to calculate Residual Carrier measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :CONFigure:MACCuracy:RCARrier:SAMPle:SYNC 50
Sets number of samples used to calculate Residual Carrier SYNC Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:RCARrier:SAMPle:SYNC?
50

8.29.10 Tx Power - Measurement Query

:FETCh:POWer:xxx?

Description: Command returns Tx Power measurement for specified burst type.

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>,<min>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit
4 = Minimum value failed limit
65536 = Profile failed

sample count (NR1): value

avg, max, min (NR2): dBm

Query Response: :FETCh:POWer:SYNC?
7,0,0,0.0,0.0,0.0

NOTE Statusbyte may return more than one condition as a bitmask.

8.29.11 Tx Power - Sample Count

:CONFigure:POWer:SAMPle:xxx
:CONFigure:POWer:SAMPle:xxx?

Description: Sets number of samples used to calculate Tx Power measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :CONFigure:POWer:SAMPle:SYNC 50
Sets number of samples used to calculate Tx Power SYNC Burst measurements to 50.

Query Response: :CONFigure:POWer:SAMPle:SYNC?
50

8.29.12 Vector Peak - Measurement Query

:FETCh:MACCuracy:VPEak:xxx?

Description: Command returns Vector Peak measurement for specified burst type.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:VPEak:SYNC?
0,0,20,2.9,3.8

NOTE Statusbyte may return more than one condition as a bitmask.

8.29.13 Vector Peak - Sample Count

:CONFigure:MACCuracy:VPEak:SAMPle:xxx
:CONFigure:MACCuracy:VPEak:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector Peak measurement for specified burst type.
Query command returns parameter setting for specified burst type.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :CONFigure:MACCuracy:VPEak:SAMPle:SYNC 50
Sets number of samples used to calculate Vector Peak SYNC Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VPEak:SAMPle:SYNC?
50

8.29.14 Vector RMS - Measurement Query

:FETCh:MACCuracy:VRMS:xxx?

Description: Command returns Vector RMS measurement for specified burst type.

Burst Type (xxx): INITial | MASTer | SLAVe | NORMal | SYNC

Query Data: <statusbyte>,<failbyte>,<sample count>,<avg>,<max>

statusbyte (NR1):
0 = Valid
1 = Invalid
2 = Settling
4 = Inaccurate
6 = Settling and inaccurate
7 = Invalid, settling and inaccurate

failbyte (NR1):
0 = All limit checks passed
1 = Average failed limit
2 = Maximum value failed limit

sample count (NR1): value

avg, max (NR2): %

Query Response: :FETCh:MACCuracy:VRMS:SYNC?
0,0,20,1.1,1.4

NOTE Statusbyte may return more than one condition as a bitmask.

8.29.15 Vector RMS - Sample Count

:CONFigure:MACCuracy:VRMS:SAMPle:xxx
:CONFigure:MACCuracy:VRMS:SAMPle:xxx?

Description: Sets number of samples used to calculate Vector RMS measurement for specified burst type.
Query command returns parameter setting.

Range: 1 to 250

Default Value: 20

Set/Query Format: NR1

Burst Type (xxx): INITial | MASTer | NORMal | SLAVe | SYNC

Example: :CONFigure:MACCuracy:VRMS:SAMPle:SYNC 50
Sets number of samples used to calculate Vector RMS SYNC Burst measurements to 50.

Query Response: :CONFigure:MACCuracy:VRMS:SAMPle:SYNC?
50

THIS PAGE INTENTIONALLY LEFT BLANK.

Appendix A - Units of Measurement Index

The following table identifies the unit of measurement represented by the numeric value in returned meter data.

Unit Index #	Unit of Measurement
0	No Units
1	%
2	Hz
3	kHz
4	MHz
5	dB
6	dBm
7	V
8	mV
9	µV
10	dBµV
11	W
12	mW
13	µW
14	dBW
15	Vrms
16	dBr
17	dBV
18	mHz
19	µs
20	nW

Unit Index #	Unit of Measurement
21	pW
22	A
23	mA
24	µA
25	Ohms
26	KOhms
27	MOhms
28	mVrms
29	degrees
30	dB/per
31	dB/Hz
32	dBc
33	V (precision of 9)
34	mV (precision of 6)
35	µV (precision of 3)
36	dBµV (precision of 1)
37	nV (precision of 1)
38	hexadecimal
39	ppm
40	decimal
41	seconds

THIS PAGE INTENTIONALLY LEFT BLANK.

As we are always seeking to improve our products, the information in this document gives only a general indication of the product capacity, performance and suitability, none of which shall form part of any contract. We reserve the right to make design changes without notice.

CHINA / Beijing	Tel: [+86] (10) 6539 1166	Fax: [+86] (10) 6539 1778
CHINA / Shanghai	Tel: [+86] (21) 5109 5128	Fax: [+86] (21) 6457 7668
FINLAND	Tel: [+358] (9) 2709 5541	Fax: [+358] (9) 804 2441
FRANCE	Tel: [+33] 1 60 79 96 00	Fax: [+33] 1 60 77 69 22
GERMANY	Tel: [+49] 8131 2926-0	Fax: [+49] 8131 2926-130
HONG KONG	Tel: [+852] 2832 7988	Fax: [+852] 2834 5364
INDIA	Tel: [+91] (0) 80 4115 4501	Fax: [+91] (0) 80 4115 4502
JAPAN	Tel: [+81] 3 3500 5591	Fax: [+81] 3 3500 5592
KOREA	Tel: [+82] (2) 3424 2719	Fax: [+82] (2) 3424 8620
SCANDINAVIA	Tel: [+45] 9614 0045	Fax: [+45] 9614 0047
***SINGAPORE**	Tel: [+65] 6873 0991	Fax: [+65] 6873 0992
UK / Cambridge	Tel: [+44] (0) 1763 262277	Fax: [+44] (0) 1763 285353
***UK / Stevenage**	Tel: [+44] (0) 1438 742200 Freephone: 0800 282388	Fax: [+44] (0) 1438 727601
***USA**	Tel: [+1] (316) 522 4981 Toll Free: 800 835 2352	Fax: [+1] (316) 522 1360

* Indicates Regional Sales/Service Center

AEROFLEX

Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven, customer-focused.